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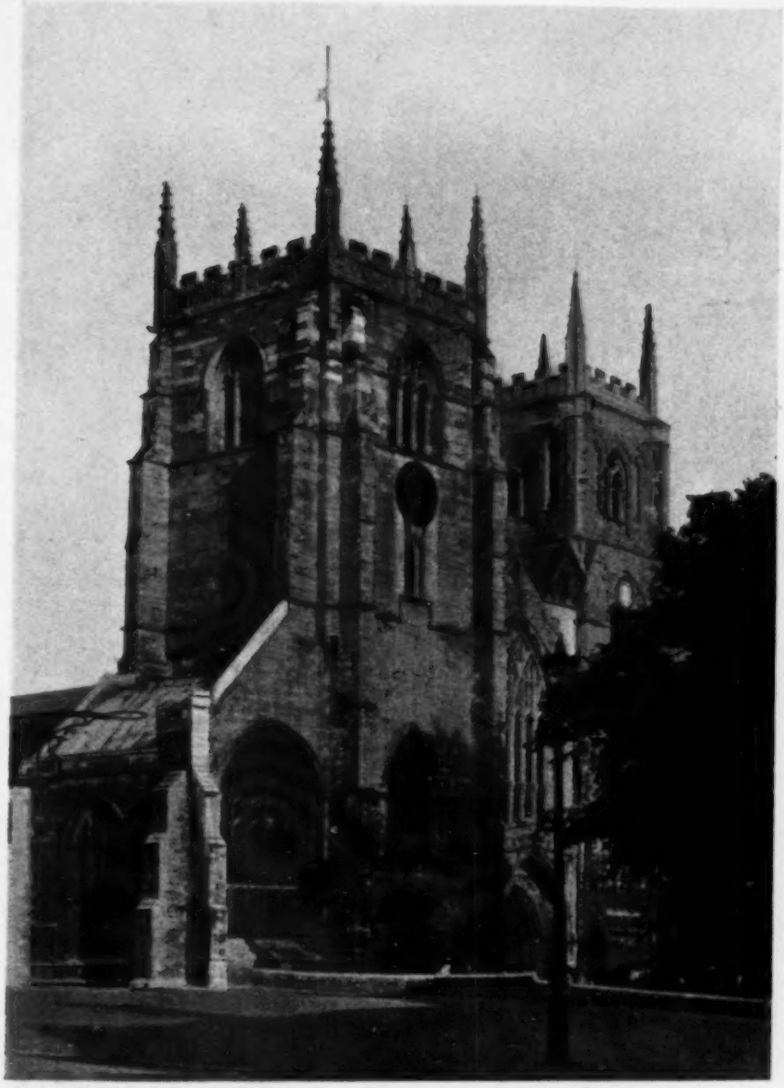


Photo: Mr. L. E. Walker.

St. Margaret's Church, King's Lynn.

MEETINGS

FRIDAY AND SATURDAY, *April* 11 *and* 12.

Royal Sanitary Institute. Discussion on "Modern Elementary School Construction," by Mr. R. L. Honey; "Special Difficulties in Housing," by Mr. T. Topping; and visits to the Rochester and Chatham Joint Sewage Works, the Royal Naval Hospital, etc. Meetings at the Town Hall, Chatham. 4.30 p.m.

SATURDAY, *April* 12.

Incorporated Clerks of Works' Association. Annual Dinner. At the Holborn Restaurant, W.C.1. 6 p.m.

Institution of Municipal and County Engineers. South-Eastern District Meeting. At Bromley. 11 a.m.

MONDAY, *April* 14.

London Society. Dr. Raymond Unwin on "The Decentralisation of Industry." 5 p.m.

Carpenters' Hall Lectures. Rev. Canon S. A. Alexander on "The Preservation of St. Paul's Cathedral." 8 p.m.

Institution of Civil Engineers of Ireland. Ordinary Meeting. At Dublin. 8 p.m.

WEDNESDAY, *April* 16.

Liverpool Architectural Society. Mr. S. English on "Ultra-Violet Ray Transparent Window Glass." At Bluecoat Chambers, School-lane. 6 p.m.

Institution of Civil Engineers. Mr. P. A. Scott on "Weymouth: Bincleaves Firing Station; Repairing and Strengthening of Reinforced-Concrete Pier." 6.30 p.m.

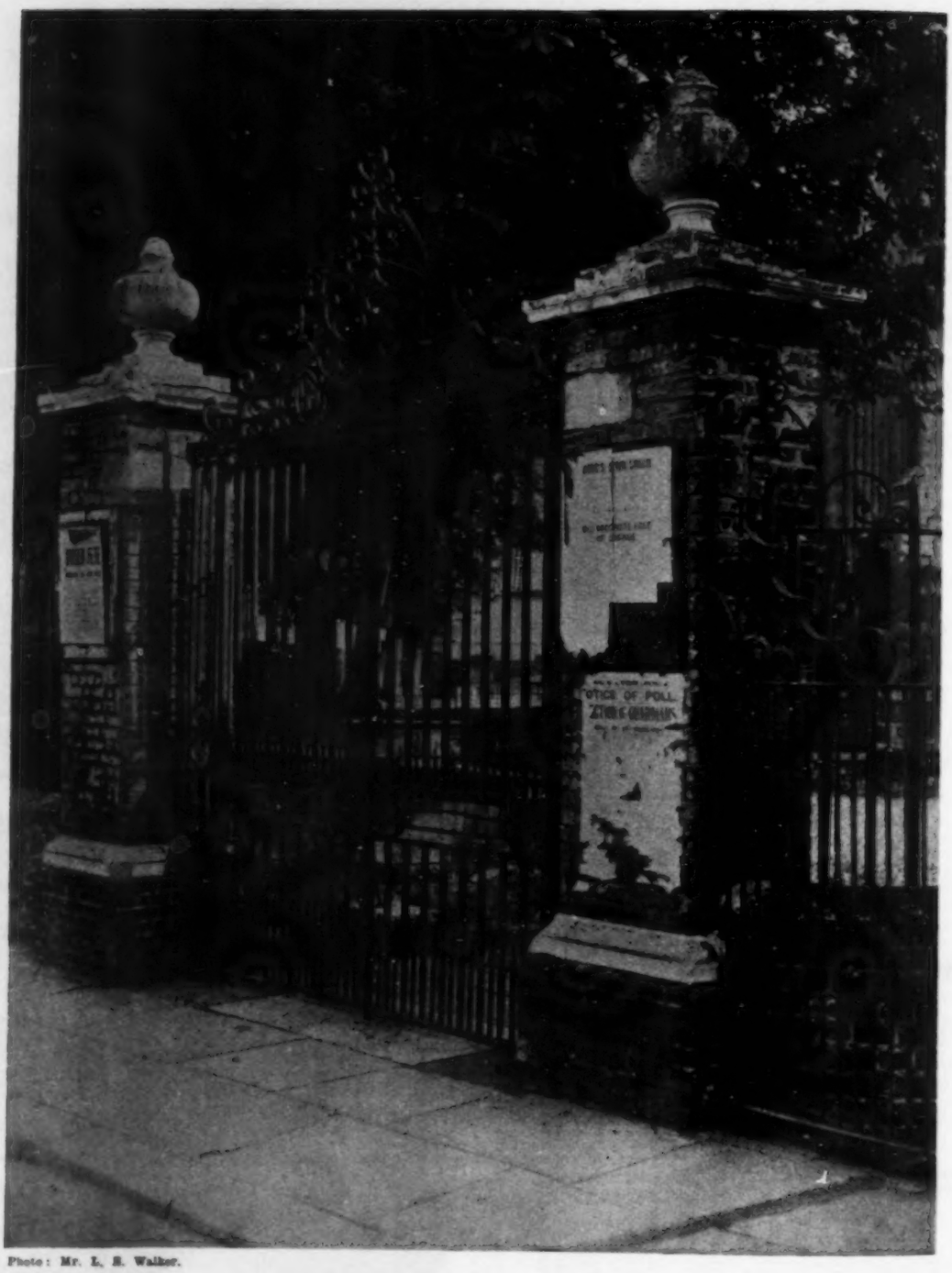


Photo: Mr. L. S. Walker.

Gates to St. Nicholas Church, King's Lynn.

WHAT IS AN ARCHITECT?

WHEN we hear that a certain man is an architect, or a certain boy is to become an architect, we are apt to visualise a fairly definite career. It matters not whether he is to flame in the public eye with some competition triumph, to turn some fortunate social advantage to prosperous effect, or to relapse into provincial obscurity, he is, to the ear and mind, one of a pattern. We imagine him as arriving into the professional field with some talent for drawing or leaning towards art; then progressing through a course of intensive culture to some definite professional qualification; and finally settling down into respectability, mixing in all societies with equal ease, and bringing up another generation of cultured beings.

Written so in bald terms, it is a somewhat humdrum, commonplace story, in which the names of Ictinus, Palladio, or Inigo Jones read foreign and unrelated. These latter suggest that our use of the title might be more selective; and if we can arrive at the stage of questioning the common picture of the architect, we seek him, not in the columns of the trades and professional directory, but through the channels of fine architecture. For the title of "architect" is a noble one, as his art is inspiring.

We begin to think less of his well-cut suit, the company he keeps, his *savoir faire*, and his easy artistic conversation; and we begin to think that the only justification for his existence is his influence for good upon the quality and manner of our building; and having narrowed our vision so far, we find still a perplexing prospect, because we find it difficult to be sure how and when and in what way his influence is to be exerted, and when and where that influence has been for good.

Every piece of fine architecture has had its architect, whether he was called the name or remembered as "master mason" or "master builder"; for no architectural entity could lack the master mind which conceived it out of nothing but the constructional problem. Yet these names were more than alternatives, for they represent different ways in which fine building has been directed. We know little of the master masons of the Middle Ages; but they must have been men who arrived through humble beginnings at the vision that acts in a big way. They "built" in a way more literally true than our architects of to-day can profess when they refer to their achievements. Of the great figures of the Renaissance we know a little more. We know them to be, perhaps, a little less related to the craft of building; but we know also, by the evidence of their works, that they possessed the genius for directing the free initiative of a school of able craftsmen. The master builders of the small Georgian towns remain more obscure. We meet their names, now and then, in the deeds of properties, or faintly on the lichened stones of the churchyard, and speculate as to which of the fine town houses which commerce has yet left untouched were theirs. But if we have lost many of their names, we know them to have been craftsmen, whose taste was yet unvitiated by fruitless conjecture. If they did indeed copy their doorways from the many text-books of the times, they reproduced the academic model in vigorous liveliness.

All these types suggest an intimate contact with the facts of building, without which structural perfection seems impossible. We have many able architects in this generation, but few of them could protest justly if it were suggested that they have become more detached from the builders than ever before. In this we do not suggest any social estrangement or mistrust, but merely an executive detachment which is a bar to perfect building.

The mediæval master was right in the midst of it—the master of hammer and chisel, as well as of proportion and composition, little as he bothered with these as words. Very few modern architects have stood at the bench or handled a trowel. The Renaissance master had but to hint for the genius of the craftsman to be released. To-day, the architect rarely uses the craftsman in this way. The eighteenth-century master builder knew one manner of building thoroughly. To-day the architect revolves from style to style of history, or from one European model to another of modernism, or so it seems in moments of depression. School training and the means of professional qualification seem to aim away from that contact between architect and craftsman which history has taught us to be the essential of fine building, and we are threatened with an architecture without a soul, geometrical ingenuity drawn on paper by black-coated theorists, and petrified into fact by uninterested but obedient workmen. The creative faculty may be kindled at the drawing-board, but it knows no triumph other than in stone. Are these tendencies the inevitable product of a more complicated social scheme? Must the cleavage between the ranks and the staff be distinct, just because the time of each is so limited, and the task of each so great? An affirmative accepted might solve a confusion, but at what a cost!

For ourselves, we are not satisfied that prevailing tendencies are either inevitable or tolerable. Is there much hope for this century to write a grand page of architectural history, until architects have found a better way of developing and encouraging the initiative of craftsmen? We believe that a more sincere searching after realities would point the way to a better order.

There is a great opportunity for secondary education. The grammar schools are no longer a training ground only for the professions, for the increasing number of "free places" render them more catholic in scope. Here it is that the potential architect and craftsman train side by side, and that is the opportunity for a beginning to be made in promoting the common factors of their outlook. Theirs should be integral parts in a great social scheme, not a divergence towards foreign careers.

There is scope also for greater contact between the architectural and technical schools—a chance for the architectural student to gain some familiarity with the tools of the craftsman, and a chance for the craftsman student to learn something of the manners of fine architecture. If we could vision the architect spending some of the time given to club-room or golf links on a scaffold instead, with mallet and chisel or trowel and the craftsman aiming at form and design as he works, we might see also the vague outlines of a dream in which fine architecture loomed out as a living fact.

We are not given to pessimism, but light-hearted flippancy has to be met with a long face. At least we may suggest that behind our depressing ruminations is the germ of a truth which might be worked upon by those able to influence the trend of events. Few of the optimists can be satisfied with present conditions, or completely confident as to future developments, and when this is the case it is time for us to search our hearts. Schoolmasters, professors of architecture, practitioners, and those happy ones who have retired from successful practice and remain as benevolent spectators might think over what we have said, and see what can be done.

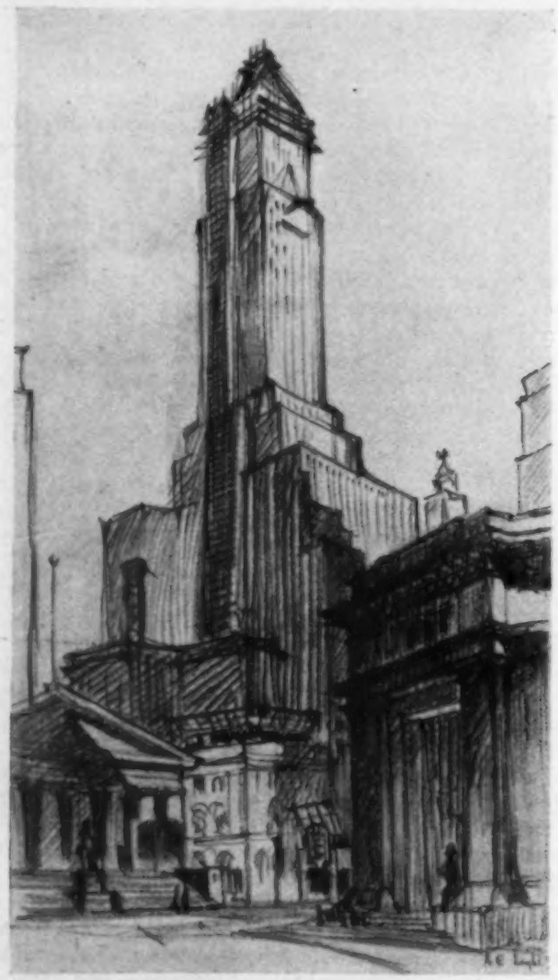
NOTES

The Charing Cross Opposition.

The evidence against the Charing Cross scheme is now becoming very widespread. Mr. Nesbit Kemp's letter, which we publish to-day, is only one of many expressions of support we have received. It is, we suppose, pretty obvious that a statesman-like and far-reaching scheme for the whole central area of London from Westminster to Blackfriars is enough to take the breath away from those with a parochial mind. But—and this is a big but—it is the duty of all who have in their power the direction of the welfare of London to face the ultimate issues and to set about laying the foundations for its proper, wise development. The project to spend ten to fifteen millions on a scheme for the improvement of the Charing Cross area is only a part of what is needed. But our claim is that whilst we cannot at present put into practical form the whole problem of the southern bank of the Thames, we must, if we allow ourselves to think of the future, so plan any present undertaking that what we do now will be a step in the right direction for future development and not produce a haphazard plan for a mere sectional matter like a new bridge.

The Real Issue.

If our Houses of Parliament are largely made up of statesmen, what can we think of Parliament agreeing to a scheme for Charing Cross which makes a right development of London in the future an impossibility? After all, the future of London, which we have to consider, is a matter of Imperial concern. We have been assured that there are millions of pounds to be gained in increment values if we develop the south bank of the Thames with vision and forethought, and perhaps this is the strongest argument to put before "a nation of shop-keepers," as we have been called. But surely there is enough imagination amongst us to look beyond even the question of immediate money values. Whilst there is no necessity to embark immediately on schemes of enormous cost, one should surely be compelled to think of those claims which lie upon us for the future development of an imperial city which must be for ever the focal point of a mighty empire.



The Bank of Manhattan, New York.

From a Sketch by Mr. A. C. Light.

(*See page* 706.)

International Congress of Architects.

We are informed that twenty-six nations will be represented at the twelfth international Congress of Architects to be held at Budapest, Hungary, in September. Preparations for this convention, and for the international exhibition of architectural projects in connection with it, are progressing satisfactorily, according to reports from all over the world. The congress promises to be one of the outstanding events of the year not only from a strictly technical point of view, but also from a broader cultural and artistic standpoint. The idea of the convention met with unanimous approval in all countries. The national committees are being organised successively, under the patronage of the leading personalities of the respective nations. The Swedish Crown Prince undertook the chief patronage of his country's delegation; among the patrons of the Dutch group are the Minister of Education and Arts, Mr. Westendorp, Rector of Delft University, and Mr. Roland Holst, Director of Fine Arts. As far as Great Britain is concerned, Mr. Ramsay MacDonald, the Premier, and Viscount Chilston, His Majesty's Minister to Hungary, have accepted the patronage of the British delegation. Argentine has officially declared her participation, and the Associations of Architects in New York and Washington, as well as the technical press in the United States, closely follow developments. According to an announcement received from Greece, Mr. Balanos, Director of Monuments at the Acropolis, will attend the Congress and deliver an address on results of the latest excavations made in his region. The following guests, we are told, are expected from Germany: "Mr. Fritz Roeger, constructor of the world-famous 'Chile-Haus,' from Hamburg, who will address the Convention regarding clinker constructions; Mr. W. Groepius, from Berlin, leader of the up-to-date tendency in German architecture; and Mr. Adolf Bosslet, Bavarian church constructor, the great reformer of the art of church construction in Bavaria, who will exhibit his latest works at the international exhibition of projects."

Protection for Workmen in Bad Weather.

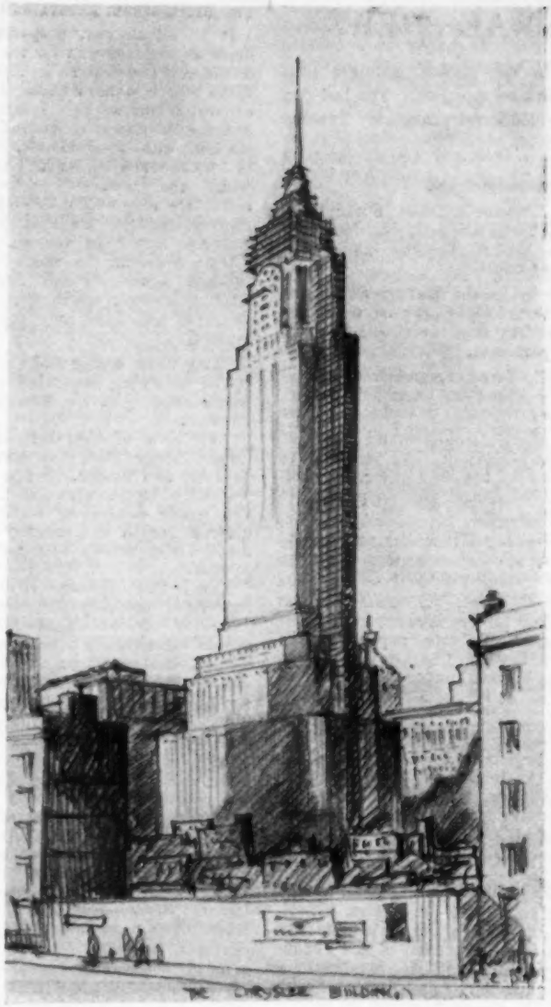
An interesting method is now being adopted in the Champs Elysees in Paris, designed to give the building trade operatives every possible protection against inclement weather conditions. The skeleton of a building has been temporarily filled in with boarding, and windows made of talc inserted so as to provide light. Thus the workers are able to carry on their daily task undisturbed by rain or weather of any kind. The experiment is being watched with interest. Obviously it adds to building costs, but on the other hand these may be

reduced if the output of the operatives is increased, owing to the better conditions of work. It must also be remembered that the hours of work in France are much longer and the rates of pay much lower than in this country.

Studland Church. ALL lovers of Norman architecture will be concerned to hear of the serious condition of the roof of the church of St. Nicholas of Myra at Studland. Dry rot is eating into the beams, and it is estimated that at least £2,000 will be required for the restoration. The residents of the picturesque little village, set at the east end of Ballard Down, are quite incapable of raising such a sum. They did their best when in 1880 the structure of the church was threatened with collapse. At that, time, with the help of the Society for the Protection of Ancient Buildings, the structure was put into thorough repair. The roof, which must now be reconstructed, is modern, for it was put into position in 1838.

Decorative Frieze Pictures. FROM some points of view there is a very unhappy contrast between the pleasant and dignified effect of the old Regent-street and the narrowed effect produced to-day by want of good scale between the width of the street and the greatly increased height of the frontages. The enterprise of some of the lessees has, however, in a measure, triumphed over the unfortunate changes and some of the new buildings have rich and not undignified interiors. An addition of unusual quality has been made to the shops occupied by Messrs. Austin Reed, who have added yet another building to their premises, and last week opened a fine gallery (the Red Lacquer Room) decorated in red lacquer with admirable frieze pictures by Mr. Fred Taylor, R.I. This is one of the best galleries recently created and in its rich breadth of colour has realised very fully the design of Mr. P. J. Westwood, the architect. The lacquer panels have carved insets, coloured and gilt, which came from China during the Boxer troubles. The frieze represents scenes from tropical countries and suggests the charm of an Eastern setting.

A Wren House. WE may surely feel pretty confident that the fine old house in Vicarage-road, Battersea, illustrated in the Society of Arts *Journal* (April 4) will be carefully preserved. As the journal of the Society says, "Battersea has now an opportunity to release this very beautiful house from its Victorian entanglements and put it in repair for some purposes of real education." As the journal continues, some purposes of education could surely be served by keeping the house and its noble rooms for exhibitions of industrial art or other activities connected with education. If the Battersea Borough Council appreciate their responsibility to the community they will not only keep the house but see that the noble staircase and the panelled rooms are put back to their original condition. The journal remarks that no architect of any standing would be responsible for removing this interesting eighteenth-century house.



The Chrysler Building, New York.

From a Sketch by Mr. A. C. Light. (*See page* 703.)

Waste of Labour in Building Industry. A CORRESPONDENT writes to us as follows: "One of the most frank exposures of the present state of the building industry, which is known to be under the consideration of the Government at the present time, is given in the issue just published of the journal of the National Institute of Industrial Psychology. The writer of an article on rationalisation in the building trade is said to be a working man who possesses inside knowledge of the conditions he describes. He points out that the huge cranes often seen in a big city are usually the plant of a sub-contractor and that after the main structure is up, the crane comes down and thereafter all materials have to be manhandled. 'All sand and material for plastering, for woodwork, for bricks work, or for concreting, are moved and transported to their various destinations within the building by exactly the same methods as were employed by Chephren and Mycerinus, who built the Pyramids five thousand years ago.' As an example of the wasteful expenditure of human energy to-day, the writer describes a theatre on which he worked. He says that each day several tons of sand would arrive and would be put into sacks, about a bushel in each, and thence carried up eleven flights of steps—about a hundred in all. He points out the enormous and costly waste of manhandling, as well as the great physical strain upon the workers. The Institute of Industrial Psychology for some time past has been anxious to investigate more closely the primitive methods of work which prevail in the building industry." But we may express our doubt of the correctness of the general application of the criticism, believing that modern builders are very keen to eliminate waste.

GENERAL NEWS

***** Owing to the Easter Holidays next week, we publish on April 17. The last day for receiving Editorial copy is Tuesday morning, April 15.**

Professional Announcements.

Mr. W. H. Duncan Arthurs, Surveyor to the Congleton Town Council, has been appointed to a similar position under the Tiverton Town Council.

Mr. H. Knowles, of the Borough Surveyor's Department, Rochdale, has been appointed architectural assistant in the Crewe Borough Surveyor's Department.

Mr. Albert C. Freeman, architect, has removed to "Sheckles Pen," Stambridge-road, Rochford, Essex.

Mr. W. H. Flood, architect and surveyor, of Wymondham, Norfolk, has removed to new offices next to the post office, Market-street, Wymondham, and will be pleased to receive catalogues, etc.

Mr. David Barclay Niven has removed to South Lodge, South Bolton-gardens, London, S.W.5. Telephone: Kensington 7570.

Mr. E. Stone Collins, F.R.I.B.A., wishes to announce that he has taken into partnership Mr. Brian S. Roberts, nephew of the late Mr. Ralph Knott. The practice will be carried on as before, under the name of Knott & Collins, at 14, John-street, Adelphi, W.C.2.

The following appointments have been made by the Dewsbury County Borough:—(a) Mr. G. E. V. Boldry as water engineer; (b) Mr. Ernest Shaw, M.Sc., A.M.I.C.E., as borough engineer; (c) Mr. T. Blakeley, A.R.I.B.A., as borough architect.

Shakespeare Memorial Theatre Contract.

A tender of £128,000 by Messrs. G. E. Wallis & Sons, of London and Maidstone, has been accepted for the erection of the Shakespeare Memorial Theatre at Stratford-on-Avon. The architect is Miss Elisabeth Scott, A.R.I.B.A., 3, St. George's-terrace, N.W.1.

Sir Lawrence Weaver's Estate.

Sir Lawrence Weaver, K.B.E., of Dunedin, New-road, Ashtead, Surrey, chairman of the Council of the National Institute of Agricultural Botany from 1919 to 1924, a member of Lord Lee's Commission on Cross-River Traffic, who died on January 9, aged 55, left property of the value of £30,738, with net personalty £28,263.

New Housing Estate, Wakefield.

The Minister of Health, on March 22, cut the first sod in connection with the Wakefield Corporation's housing estate at Eastmoor. Between 800 and 900 houses are to be erected, and special consideration has been given to the provision of adequate open spaces. The city architect is Mr. Percy Morris, M.S.A., Town Hall, Wakefield, West Riding.

Traffic Signals at Bath.

At the recent meeting of the Bath T.C., the chairman announced that Mr. A. J. Taylor, F.R.I.B.A., had given prizes in a competition open to students attending the R.W.A. School of Architecture, at Bristol, for designs for a permanent "traffic sign post" suitable for placing at cross roads and similar places. The awards had now been made, and Mr. Taylor had kindly placed the designs submitted at the disposal of the City Engineer for consideration. It was resolved that the best thanks of the committee be tendered to Mr. Taylor for his public-spirited action, and that the City Engineer report to the committee an estimate of the cost of the erection of such signs.

The Herculaneum Excavations.

It is learnt that preparations are being made at Herculaneum for the official opening of the new excavations on April 21. Another house has now been added to those already excavated this winter. It has a garden, with a fence of columns, and all the floors are covered with good mosaic. The atrium is of white marble, with mosaic designs, while the frescoes in several of the rooms are very well preserved, notably those representing the Rape of Europa and the Farnese Bull. In the garden is a small bronze fountain, to which water has been brought again through lead pipes nearly 2,000 years old, which still run underneath the villa and have only needed some slight repairs.

Charing Cross Bridge Bill.

The following resolution was passed at a recent meeting of the Thames Bridges Conference:—

"In view of the fact that the Charing Cross Bridge Bill has obtained a second reading, and cannot, in Committee, be substantially improved, the Thames Bridges Conference desires to reaffirm, for reasons given at length in a recently published statement, its opposition to a radically imperfect scheme."

Note.—The Thames Bridges Conference represents the Royal Academy, the Royal Institute of British Architects, the Surveyors' Institution, the Town Planning Institute, the London Society, the Architectural Association, and the Architecture Club.

St. Andrew's Church, Bedford.

The Bishop of St. Albans dedicated the completed nave of the above church recently. The building is in the early English style, and its leading features are the well-proportioned columns and arches, lancet windows and open timbered roof in pitch pine. Five stained glass windows have been presented by various donors. The stone used is Northamptonshire stone, and the roof is covered with green Westmorland slates. The present nave has seating accommodation for about 300. It is hoped in the course of the next few years to complete the chancel, organ chamber and transept. The plans have been prepared by Mr. George P. Allen, F.R.I.B.A., of 81, High-street, Bedford, and the contractors were Messrs. J. Corby and Son, of Tavistock-street, Bedford.

Town Planning.

The following town-planning progress in England and Wales for the month ended February 28 is recorded by the Ministry of Health:—

Preliminary Statement approved (Stage BB):—Devon: Plympton St. Mary R.D.C.; Kent: Canterbury T.C. (No. 2); Staffordshire: Wolstanton United U.D.C.

Resolution received (Stage A):—Devonshire: Brixham U.D.C.; Kent: Broadstairs and St. Peter's U.D.C.; Warwickshire: Coventry T.C. (Baginton Area), Warwick R.D.C. (Coventry T.C.); Yorkshire (West Riding): *Brighouse T.C., *Hipperholme U.D.C., *Southowram U.D.C., *Halifax R.D.C.

* Resolution passed by the Brighouse Region Joint Town Planning Committee.

OBITUARY

H. Percy Adams, F.R.I.B.A.

We regret to record the death, at the age of 64, of Mr. Harry Percy Adams. Mr. Adams had a distinguished career as a student. He was Silver Medallist for Measured Drawings in 1888, Donaldson Silver Medallist 1888, and Godwin Bursar 1894. He was also first prizeman at the Royal Academy Schools and won medals at South Kensington and London University. His first important success won in competition was for a hospital at Bedford, and his design already showed the lucidity in planning and practical grasp of hospital administration which characterised all his subsequent work. His design for the Royal Victoria Infirmary at Newcastle, another competition success, showed on a larger scale the same qualities as Bedford. Many other hospitals followed, and, as a result, he was appointed architect for the King Edward VII Sanatorium, near Midhurst.

After the War he continued to design hospitals, adapting himself to the changed conditions. Quite at the end of his career he invented a new type of hospital ward which is embodied in the design of the new hospital of Southend, and this type seems likely to mark a distinct step forward in the history of hospital planning.

In addition to his hospital work, he was responsible for the new buildings of the Law Society, the Institution of Electrical Engineers, the Orchestral Association, and the British Medical Association, and some large blocks in Bloomsbury. With his firm (he was senior partner in Adams, Holden, and Pearson, of Knightsbridge), he was responsible for that remarkable building, the new offices at St. James's Park, for the Underground Company. He had the gift not only of inspiring his staff and all connected with his work with his own enthusiasm, but of winning their affection at the same time. He was elected Fellow of the R.I.B.A. in 1896, and was a member of the Council during the session 1913-14.

Other Deaths.

We also regretfully announce the deaths of:—Mr. Edward M. Blake, F.R.I.B.A.; Mr James Hoey Craigie, F.R.I.B.A.; Mr. Samuel Holland Healing, F.R.I.B.A.; Mr. Albert Edward Lambert, F.R.I.B.A.; Mr William James Morley, F.R.I.B.A.; Mr. Arthur Sykes, F.R.I.B.A. (retired), Soane Medallist (1889); Mr. Leonard Finnegan, A.R.I.B.A.; Mr. John Rogerson, A.R.I.B.A.; Mr. William Pollard, L.R.I.B.A.

COMPETITION NEWS

COMPETITIONS OPEN.

	Particulars published in "Builder."	Sending in-date.
Design Competition in two classes (over and under 25 years of age), for aeroplane hangar. A.A.S.T.A., in conjunction with Messrs. Ewart & Son, Ltd. Messrs. W. H. Hamlyn, A.R.I.B.A., C. McLauchlan, A.R.I.B.A., and A. N. Cathcart, assessors. Conditions from Secretary, A.A.S.T.A., 26, Buckingham Gate, S.W.	April 4	May 16
R.S.A. Competitions for industrial designs. £1,900 in scholarships and prizes. Full particulars from Secretary, Royal Society of Arts, John-street, W.C.2 ...	Jan. 31	May 26
New Public Library and Museum, for Chelmsford T.C. Mr. H. V. Lanchester, F.R.I.B.A., assessor. Conditions from G. E. Barford, Town Clerk, Clerk's Office, Chelmsford. Dep. £1 1s.	Feb. 21	June 14
New Town Hall and Municipal Buildings, for the Luton T.C. Premiums of £500, £300, £200 and £100. Sir Brumwell Thomas, F.R.I.B.A., assessor. Conditions from Mr. W. Smith, Town Clerk, 2, Upper George-street. Dep. £2 2s.	Mar. 14	--
Public Baths, for Corporation of Kingston-upon-Thames. Premiums of £300, £200, £100 and £50. Mr. J. Ernest Franck, F.R.I.B.A., assessor. Conditions from Mr. A. W. Forsdike, Town Clerk's Office, Kingston-upon-Thames. Dep. £1 1s.	Mar. 14	June 14
New Masonic Hall, Enniskillen, for Enniskillen Masonic Body. Open to architects practising in Ireland only. Premium, £50. Mr. John Seeds, F.R.I.B.A., assessor. Conditions from Mr. R. W. Smith, Hon. Sec., Building Committee, Masonic Hall, Enniskillen. Dep. £1 1s.	April 4	--
Municipal Buildings in Chanel-road, for the Worthing T.C. Premiums of £350, £250, £150 and £50. Mr. H. V. Ashley, F.R.I.B.A., assessor. Conditions from Mr. J. Kennedy Allerton, Town Clerk. Dep. £1 1s.	April 4	July?

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Government Officials and Private Work.

SIR,—Mr. Davidson's letter in your issue of April 4 contains some remarks upon the Association of Architects, Surveyors and Technical Assistants which may be misleading. Mr. Davidson inquired whether the Association was only interested in economic questions and whether it had any care for good architecture. A sufficient answer can be found in the following points :—

The A.A.S.T.A. has contributed over £50 to the R.I.B.A. Maintenance Scholarships Fund. Being concerned by a need for the better training of young men entering the profession, the Association made representations to the R.I.B.A. These resulted in the "Outline Course of Study for the Guidance of Architects who accept Pupils in districts where Professional School Education is not available," which was issued by the R.I.B.A. Council in 1926. For some years the A.A.S.T.A. carried on a Correspondence Design Club for the benefit of its younger members. It was terminated because other educational opportunities had increased.

Mr. Davidson's remarks about officials devoting time to private work in official hours and in official premises, seems like hearsay rather than evidence. If there is a definite instance I think the proper course would be to call the attention of the authorities concerned, with a view to ending these irregularities. In any case, to condemn the many for the sins of a few is not playing the game, and I trust we may be spared further appeals to prejudice couched in this vein.

The A.A.S.T.A. has never countenanced improper conduct and long since expressed the view that a man holding an official position should not accept any private work (to be dealt with in his own time) which would involve an application to the authority by which he is employed. I do not see that any power on earth can prevent a man doing work in his own time except a condition similar to that just mentioned, which provides a legitimate bar. The best remedy for this trouble is to secure adequate pay for the officials. This being done, their inclinations to accept spare-time work will soon die away.

The steady trend towards salaried departments is not confined to our own profession or to our own country. It is widespread and inevitable. The private practitioner as we know him was almost a product of the nineteenth century, but is it any use sighing for those palmy days of the mid-Victorian era when the private practitioner enjoyed a position which he never held before and which he has already lost?

The policy of the A.A.S.T.A. is to admit, in principle, the right of an employer (public or otherwise) to engage professional service on a salaried basis, but to reserve the right to exert influence towards rectifying conditions which are unfair to the salaried man, or unfair as between the salaried man and the private practitioner. If this is not a good policy, the pursuit of which must benefit the whole profession, then Mr. Davidson is welcome to offer us something better.

A. SEYMOUR REEVES, L.R.I.B.A.,
Secretary, The Association of Architects, Surveyors and Technical Assistants.

SIR,—Both Mr. Davidson and "J. D." appear to have misunderstood the letter which you were good enough to publish over my name in your issue of March 28. Its purpose was to argue that the profession of architecture has undergone an immense change in the last forty years—a change brought about by developments in the whole structure and relative size of industrial and commercial organisation. This being so, I was persuaded to combat the naive but dangerous belief of Mr. Davidson that if Government departments were restricted in their compass, and their staffs forbidden to undertake private work, "private architects would be fully occupied, as they were thirty years ago."

I am not concerned with any issue other than that architects are foolish if they do not recognise that salaried employment is immensely on the increase from causes other than those adduced by Mr. Davidson. To add one further point, not mentioned in my previous letter, I really am very sceptical as to the value of bothering our heads about the meagre odds and ends of private commissions which come the way of the average Government official. There are far greater problems awaiting our efforts.

V. LESLIE NASH.

SIR,—In his letter, in your issue of April 4, Mr. William Davidson cites as the Institute's declared policy that the progress of architectural design is the chief aim of all decent architects and that the greatest good for the greatest number can best be achieved by adhering to this ideal. I am beholden to him for this statement; I have often vainly pondered how it might be contrived to account for the comfortable superstition that the progress of architecture is somehow a matter of course and independent of the development, evolution, or progress—call it what you will—of the individual architect.

For obvious reasons, this progress of the individual is something left tacitly undiscussed. It would, for instance, be difficult to see how "architects" could carry on large reputational businesses or departments without "office staffs," and it would also be difficult to see that such businesses or departments were otherwise than mere clogs in the way of the artistic evolution of the individual.

I should be interested to know what the Institute intends by "the greatest good for the greatest number." In terms of the artistic evolution of the individual, I myself can only think of it as meaning the greatest freedom and opportunity for the greatest number of individuals to evolve artistically.

M. M.

Architects and Manufacturers' Representatives.

SIR,—The following notice appears on the office door of a well-known firm of architects :

"Business Representatives are informed that they can only be seen by appointment.

'This is a Necessity.

"Not a Discourtesy.

"An endeavour is made to file for future reference all particulars, etc., left here."

Surely this is better than the customary and brutal "No travellers seen except by appointment." A little tact of this kind at least does something to soothe the feelings of the unfortunate manufacturer's representative.

H.

SIR,—In your issue of the 4th inst., there appeared a letter contributed to the series on "Architects and Manufacturers' Representatives," signed by a gentleman using the *nom de plume* "Sebastian Cabot Gwilt." This letter relates to a somewhat unfortunate experience with a manufacturer's representative. We feel that the use of this *nom de plume*, which is likely to be connected with our widely-known material "Cabot's Quilt," gives rise to a certain amount of ambiguity, and might be taken by some who do not know our representatives to infer that the incident related happened with one of them. We, ourselves, of course, know that the facts given do not apply to any of our staff, but we should be greatly obliged to "Sebastian Cabot Gwilt" if he would remove the ambiguity thus occasioned.

HUNTLEY AND SPARKS, LTD.

Charing Cross Development.

SIR,—*The Builder* is doing valiant service to the nation in so vigorously opposing the monstrous scheme for the development of this beautiful site by the London County Council, who appear to consider it is a private undertaking of their own and the Southern Railway Company; whilst, in fact, it is a most important matter to the public, who, having to find the enormous sum required, should have alternative and less costly schemes explained to them, and public meetings should be called for that purpose.

Mr. J. B. Thorp's beautiful model is likely to obtain the approval of many who have not examined and carefully considered more simple schemes, and they would, no doubt, change their views if they saw a model of a single direct road from the Strand to Blackfriars Bridge-road which would provide all the traffic accommodation needed and save the destruction of many valuable rent- and rate-paying premises.

The L.C.C. appear not to have thought it worth while to consult those two most interested authorities, the Westminster City Council and Lambeth Council, who object to the scheme, as they will be great financial losers if the proposed plan be adopted. What is the advantage of having two roadway approaches to the bridge from the Strand, and the complicated circus on the south side of the river, which can only lead to traffic confusion and extra police supervision? For such an extremely important London development architects and engineers ought certainly to be invited to submit drawings in competition.

FREDK. NESBITT KEMP.

Specification of Materials.

SIR,—Mr. Hugh Arundale, in your issue of March 28, deals very fairly, in our opinion, with the relative position of this phase of the building industry. We go farther, and say it would appear that architects, or some of them, do not seem to have the courage to specify materials of proved superiority, and that others do not recognise such superiority because they are not possessed of the knowledge of the material which would enable them to distinguish good from bad.

It appears to be a general idea, and is in fact openly and defiantly claimed, that the architect is not possessed of any right to specify and choose the common bricks to be used in a building, and this choice must be left to the builder. So the selection of the main structural material of most buildings, that material upon which the life of the building mainly depends, is left to the builder. He, in many instances, has no knowledge of the quality, and if he has, is influenced solely by a low price, or perhaps by the existence of an unpaid account of the producer of rubbish. It is positively appalling to note the disgraceful quality of bricks used, and still being used, on buildings of all classes since the War—soft, porous, laminated, underburned bricks, falling to pieces from the effects of limestone even in the walls after being laid; or more clay sponges made from colliery refuse are being used, without objection, not only to house the people, but for important structures that the hand of time has yet to deal with.

Yet, reading through architects' specifications one sees many lines devoted to the specification of trifling interior decorative matters which could at any time be replaced for a few shillings. Mr. Arundale writes, "loose specification leads to jerry building." It will, we venture to suggest, lead to the discredit of the architectural profession before many more years have passed.

CERAMIC.

(Correspondence continued on pp. 705 & 726.)

Re-election of R.S.B.S. President.

Mr. W. Reynolds-Stephens has been re-elected president of the Royal Society of British Sculptors for his tenth term of office. Mr. Gilbert Bayes is again vice-president, and Mr. C. L. Hartwell, R.A., treasurer. Mr. R. O. Cross and Miss Winifred Turner have been elected associates.

ANTONIO DA SAN GALLO THE YOUNGER.

A LECTURE on this subject was given at the R.I.B.A. on Monday evening last by Professor J. Hubert Worthington, O.B.E., M.A., A.R.I.B.A., when the chair was occupied by Sir Banister Fletcher, P.R.I.B.A.

Professor Worthington said Antonio Picconi da San Gallo il Giovane, or the Younger, was born in 1485. He came of a fine architectural stock, being a grandson of Francesco di Paolo Giamberti, who had built for Cosimo de'Medici, and a nephew of Giuliano da San Gallo, and Antonio da San Gallo the elder. Antonio the Younger was apprenticed to a carpenter in the stirring days of the Borgias. The carpenter's shop gave plenty of scope to artistic talent, for in addition to constructive work and setting out, wood-carving and intarsia gave a good groundwork for the budding architect. Thus Antonio, like his uncles before him, grew up in the building trade, not in the bottega of the goldsmith. The young man was ambitious and left Florence for Rome in 1503, to work with Giuliano, his uncle. The impetuous Julius II. had just become Pope, and was launching his great schemes for a new S. Peter's and a new Vatican, and the opinion of artistic Rome was divided upon the selection of the architect. Giuliano had been Julius's favourite before his elevation to the Papacy, and naturally expected the job, but Bramante had arrived in Rome, from Milan, three years before, and had already made a great name for himself. The Pope chose Bramante, and Giuliano da San Gallo returned to his native Florence. The young Antonio, who always had an eye for the main chance, got into Bramante's office, where he found Baldassare Peruzzi as his senior assistant, and throughout his life he owed a great deal to that greater artist. Raphael, too, must have often been in his company. Here was a career already half-made. He had the prestige of the family name, a training in the best office, in the best moment, of Italian Renaissance architecture, and a capacity for attracting the right kind of patron. Moreover, Bramante had a stroke, and his hands were paralysed, and though as alert in mind as ever, he had to depend to an unusual degree on his assistants. The patient working out of large schemes, and the responsibility of supervision, gave carefulness, experience, and self-confidence to his draughtsmen. Antonio was determined to become the Bramante of the future, and he did. It was interesting to relate him to his contemporaries in the year 1503, when he entered Bramante's office. He was 18, his master 59; his uncles were 53 and 48 respectively, Leonardo was 51, Michelangelo 29, Titian 26; Jacopo Sansovino and Sanmichele, both studying in Rome, were 17 and 19, Raphael was 20 and Peruzzi 22. Did the world ever hold such a galaxy of talent at one moment?

Julius died in 1513, Bramante in the following year, and Leo X, a prince among patrons, brought Renaissance art to its fullest development. Raphael, who had inherited Bramante's huge office, found Antonio, il Gobbo his brother, and Francesco his cousin, invaluable factors in an architectural organisation that he coul'd not possibly control alone. It was not only on S. Peter's they helped him. There were few plans of the period more careful than those that the San Galli drew from 1516 onwards for the Villa Madama, though Giuliano Romano was generally given the credit for this work, and Francesca built the exquisite little Palazzo Pandolfini at Florence for his master. Antonio gradually emerged into private practice in the pontificate of Leo. He won the fortifications of Civita Vecchia in competition, and built them. Then Leo took him for the summer to Monte Fiascone to work on the Papal Castle there, and there was little doubt that he gave him the pleasant little house to build for his court physician near the Vatican. The Linotte Palace, one of his smallest but most notable works, belonged to this period.

Rome was sacked in 1527. Antonio fled with the Papal Court and his young wife, to Orvieto, and made the great Pozzo there. In the panic which followed he became immersed in military engineering and rode from place to place, strengthening the defences of the Papal States. The world was full of significant events. Henry VIII. of England, whose reign almost coincided with the years of Antonio's work, broke with Rome. Protestantism was making itself felt in Northern Europe. Francois Premier ruled France. Charles V. was Emperor, and Italy was full of Spanish soldiery.

But happier days were in store, and Antonio was destined to enjoy a great epoch of reconstruction. Antonio had already lived through big history, but undoubtedly the greatest person in his life was the Cardinal Alessandro Farnese, known to history as Pope Paul III. Rome had never recovered from the horrors of sack of nine years before, but Paul now initiated great reforms. He recalled the University of Rome to life, and was one of the pioneers of modern town planning. Paul gave the word and provided the will-power and 50,000 ducats. Latino Giovenale Manetti was his chief adviser. In 15 weeks the Emperor's Highway, 3 miles long, was opened, levelled, paved and decorated; 200 houses and four churches were demolished. The famous buildings of ancient Rome were brought into full view. The rubbish-heaps, the slums were swept away, the streets were reformed, and fine sites were created, to the great benefit of the health and comfort of the people. Cardinal Giovanni Gaddi was in charge of the decorations and Antonio da San Gallo had supreme control over the sculptors, painters, carpenters, and stonemasons.

The improvements to Rome did not end with the stately ceremonies in connection with Charles the Fifth's visit. Manetti continued to be "maestro delle strade" with Angelo del Bufalo de'Cancellieri as administrator, and Bartolomeo Baroninvas as engineer. Modern Rome was being made. From 1536 to 1549 the great works went on: streets and squares and mighty buildings took form on every side, and Antonio as chief architect to the Pope had a large share in the work.

The rest of Antonio's life was interwoven with the life of the great Pope Paul and his family, not only as Architect-in-Chief to S. Peter's and the Vatican, or in fortifying Rome and improving the Castle of S. Angelo, but primarily in the production of his *chef d'oeuvre*, the Farnese Palace, on which he was engaged from 1530 until his death in 1546. But, in addition to his architecture proper, at Nepi, Civitacastellana and Caprarola, at Faenza, Fabriano, Ascoli and Capo di Monte, Antonio forged strong links in the Farnese chain of fortifications. Castro, the lair of Pier Luigi, with its walls and citadel, its streets and palaces, was one of the most important episodes in his career, but it had perished. But the greatest of all his military works was the citadel of Perugia, one of the most remarkable creations of its time, which, like Castro, was no more. Finally, and happily, Antonio was engaged on his own home, untrammelled by clients and committees, with only himself and his ambitious wife and growing family to please.

Antonio had cured a number of cracks and bad foundations in the Vatican as the result of other people's carelessness, but his great work there was the Sala Regia, which formed the Vestibule to the Sistine Chapel. About the same time he completed the Chapel of the Holy Sacrament in the Vatican, known as the Cappella Paolina, adjoining the Sala Regia. On one of the islands in the Lake of Bolsen, between Orvieto and Viterbo, Cardinal Alessandro, before he became Pope, commissioned Antonio to build two chapels. Here we had all-round composition at its best, set with admirable skill on a site of surpassing beauty.

The Palazzo Linotte, in the Vicolo dell 'Aquita, was perhaps the smallest, as the Palazzo Farnese was the greatest of Roman Renaissance town houses. It was one of Antonio's most successful buildings. The Banco di S. Spirito at Rome, built by Antonio in 1538 for the Papal Mint, was an interesting building at the angle of two streets, and its main façade, designed to close a vista, had a gentle concave curve.

The Palazzo Farnese epitomised the worldly pomp and splendour of this great age of display. It breathed the classic spirit in its widest sense, a sense of order, and stately calm, and breadth, that placed it above the realm of passing fashion. The vast scale, the symmetry of the plan, the balance of solid and void, the axial vista through the shade of vestibule, the sunlit court, and the shade that led to the light and colour of the garden, marked it out from its contemporaries.

The science of military engineering was part of the regular practice of the Renaissance architect. Antonio followed in the family tradition and threw himself with zest into engineering problems. The greatest piece of military engineering that Antonio carried out was the gigantic Rocca Paolina of Perugia. Paul III. commissioned him to raise the greatest of Renaissance fortresses on the dominating site, where the palaces of the Baglioni had stood.

Success was often tempered with disappointment, and the last years of Antonio's life were clouded by the miserable feud which arose between him and Michelangelo. The final episode in the enmity between Michelangelo and Antonio centred round S. Peter's. It took 10 architects and 20 Popes to build the central church of Christendom, and the work lasted 100 years. Antonio seemed determined that Raphael's design should be carried out, even though his death should intervene, for he caused his assistant, Labacco, to make the stupendous wooden model that cost 4,184 crowns. It was 28 ft. long, 18 ft. wide, and about 15 ft. high. It was primarily the interior to which Michelangelo referred in his famous letter written in 1555. "All the architects who departed from Bramante's scheme, as San Gallo has done, have departed from the truth; and those who have unprejudiced eyes can observe this in his model. San Gallo's ring of chapels takes light from the interior as Bramante planned it; and not only this, but he has provided no other means of lighting, and there are so many hiding places, above and below, all dark which lend themselves to innumerable knaveries, that the Church would become a secret den for harbouring bandits, false corners for debauching nuns, and doing all sorts of rascality; and when it was shut up at night, 25 men would be needed to search the building for rogues hidden there, and it would be difficult enough to find them."

When Antonio died in October, 1546, Paul appointed Michelangelo to all his posts, in-

cluding that of Architect-in-Chief at S. Peter's for life. Michelangelo suffered indeed for his initial unkindness to Antonio. The last days of his life were a burden, nor did he see the fruits of his hard labours against such heavy odds. Luckily, he had made a model of the dome, but the rest of the design suffered because he had left the builders in ignorance. His return to the Greek Cross of Bramante was ruined by Maderna, who lengthened the nave and spoilt the conception. But the dome was still the glory of Rome, and Michelangelo did not work in vain.

Discussion.

Sir Rennell Rodd, proposing a vote of thanks to the lecturer, observed that it was very difficult to individualise San Gallo among the many other architects by whom he was surrounded, but this Professor Worthington had succeeded in doing. Referring to the cornice of the Farnese Palace, the speaker said there was some dissatisfaction with San Gallo in connection with that work, and Michelangelo was called in, and thus the quarrel between them arose. He believed the cornice was not carried out until after the death of San Gallo.

Professor W. G. Newton, seconding the motion, said the lecturer had given an admirable introduction to the Italian Renaissance architects, and had made living personalities of them. The San Gallo family covered a most remarkable hundred years—1445-1546. Father, sons and grandsons provided a remarkable instance of an architectural family of the Renaissance, just as in our own times we had the Scotts, the Waterhouses and the Worthingtons. The lecture had a special importance and interest for students, whom the speaker advised not to go to Italy to wander vaguely about, but instead to study the work of one person or place. We should, he thought, lay down the lines of study for students so that what they brought back would be of more profit to themselves and to others.

Bishop Gore, having contributed a few remarks to the discussion,

Professor Beresford Pite referred to San Gallo's connection with S. Peter's—which he described as "the greatest building on earth—the largest undertaking of architecture"—and, after mentioning the part taken in the work by other architects, referred to the scandal which arose when the money provided for the undertaking drained away into the pockets of architects and contractors. Michelangelo then came on the scene, and with extraordinary genius compressed the plan, introduced order, and completed the job.

Professor W. Rothenstein and Professor Bernard Ashmole having spoken,

Mr. Arthur T. Bolton, having pointed out the value of the memoirs of Cellini in connection with the period, commented upon various points raised by Professor Worthington.

The vote of thanks was then put to the meeting and carried with acclamation, and Professor Worthington briefly replied.

Register of Architects willing to take Recognised Schools Students in their Offices.

Attention is drawn to the fact that at the office of the R.I.B.A. two registers are kept, (1) containing the names of advanced students of Recognised Schools, and (2) containing the names of architects willing to take such students. The intention is in this way to assist advanced students up to the stage of the completion of their qualifications for exemption from the Final Examination; one of the qualifications for exemption from the Final Examination being twelve months' experience in an office during the fourth and fifth years of the school course. The Council hope that general use will be made of the registers, and that as many architects as possible will send their names to be placed on the register.

"THE BUILDER" DEBATE

XXVIII.—THE R.I.B.A. SCALE OF CHARGES.

"That the R.I.B.A. Scale of Charges is in Immediate Need of Revision."

SIR,—I imagine that one of the chief reasons for the separate publication of the R.I.B.A. scale of charges is that the practising architect may be able to define his contract with his client by sending him a copy rather than by going into a lot of explanations. For any considerable job of average scope, the scale answers this purpose fairly well, but for small jobs of, say, less than £2,000, and for a certain amount of other larger work, the scale is more confusing than illuminating, and for the small man is definitely alarming.

Let us take the case first of a man who wishes to build a tiny cottage of, say, £500 value, and who wishes to avail himself of the skilled services of an architect. Reference to the scale of charges would show him that fees are determined on a scale sliding from 10 per cent. to 6 per cent. for jobs between £2,000 and £100, from which he is able to calculate a main fee of £45 16s for this particular job. Looking further down the scale, he sees that this fee does not include advising, etc., as to site, surveying same, preparation of further sketch designs, making extra drawings for his or the contractor's use, or for public authorities, etc., and that charges do not include cost of copying documents, lithography, and out-of-pocket expenses. By the evidence of the scale he has every reason to anticipate a bill of something like £60 over the cost of his little house, and if he is frightened at the prospect we can hardly blame him. Nor can we blame him if, faced with the alternative of employing an obscure clerk to prepare plans for about a couple of guineas, or a skilled architect for about thirty times the cost, he chooses the less satisfactory former method.

Of course, in practice these things are not treated so literally; but, if so, why have the scale at all? I would suggest that the scale be set *as a minimum* of 6 per cent. for all classes of work, and that this scale should include as many as possible of the (at present) excluded services. I should suggest, also, that a scale of allowed expenses should be determined for all work executed within a radius of, say, three miles of the practitioner's office. These are suggestions to make it possible for an ordinary client to glance down the scale of charges and see to within a pound or two what a building is going to cost him.

There are other matters, also, which require revision. Occasion arises when some purely technical factory lay-out, essentially the province of the engineer, is executed by one, although the services of an architect are required to assist in presenting a fair face to the world. There is nothing in the scale to assist any assessment of fees under such circumstances, and yet it is very desirable that such co-operation between architects and engineers should be encouraged and facilitated as much as possible.

Under present circumstances the outsider is encouraged to imagine that, if an architect is permitted to have a finger in the pie, he will assess his fees on the total cost of the job. It is a question whether the previous foolishness of the profession has not already precluded the operation of a practising architect in the field of housing. The charges first obtaining were ridiculously high, and even the revised scale is sufficiently alarming. We want a scale which is an answer to the claim of the average town council that their cheapest way of doing the job is to grant an honorarium of a few hundreds to the local sanitary inspector. I suggest that the revised scale, which is a reasonable one, should be simplified in its presentation and better tabulated, so as to be more readily compared with present costs of working.

Another branch of practice which receives no attention in the scale is that of providing plans for speculative builders. Provided an architect is satisfied that a speculative builder intends, and is able, to build well and faithfully interpret a design, there is no reason whatever why he should not co-operate in the work. In so doing he will have no detailed specification to write, and no supervision or adjustment of accounts to undertake, so that his services are much simplified. Why should not there be a low scale agreed to cover these simplified services, so that builders would be encouraged to look upon architectural advice not as an expensive luxury, but as a sound commercial investment?

Generally I suggest, also, that the scale of charges should be arranged more crisply and in a more tabulated fashion, so that facts can be readily seen and understood. If this were done, an architect would have no hesitation about sending the scale to his client as the basis of his contract, whereas now it is the last thing he dare do if he is at all keen to retain him.

POSITIVE.

THE CALTON CRAG CONTROVERSY

We have received the following letter on this subject:—

SIR,—While reading "Nemo's" letter there passed through my mind the story of the old lawyer, whose advice to all his apprentices on bidding them Godspeed on the completion of their articles was: "If you have a case, state it clearly and bring out every point; if you have not, keep off the point at issue and slang your opponent; it won't take in the judge, but it may impress the jury, who are for the most part simple souls." This, in brief, just about sums up "Nemo's" letter; however, there may be excuses. If he is a young man, he will live and learn; if of middle age, he ought to know better. There is also the French axiom, "Toujours la politesse," which might be well worth while taking to heart whenever he feels inclined to write to the Press.

It would seem that "Nemo" must not have read the Incorporation's letter or yet my one. Their letter mentioned seven architects. I dealt with the first five adequately enough, but, unfortunately, less so with the last two; I refer to Rowand Anderson and Lorimer, of whom volumes could be written.

"Nemo" is particularly anxious to sidetrack issues when they do not suit him, and he accuses me of being incomplete in my list of living architects who have done original work in Scottish Gothic or Renaissance work. I never supplied any list of contemporary architects, but I could have done so had it been necessary or expedient. I made certain statements regarding the architecture of Edinburgh, as the Capital City was under review, and I hold to them. I drew attention to the very inadequate place our Scottish architects take in open competitions, and the fact that there is nothing national in the modern architecture of our Scottish cities, and I take nothing from these remarks; but I belittled no man's work, and while certain architects were mentioned it was not done in any deprecatory way. "Nemo's" remarks regarding Merchiston Castle School and George Watson's College are so singularly inappropriate as to be only worthy of being passed over without further comment.

Throughout, "Nemo's" letter has really no bearing on the points at issue. He has not controverted or disproved anything I stated, and his contribution only contains inferences and assumptions. Really, I have not the time to bother further with him. I have read with real interest Mr. John Begg's contribution in this week's issue of your journal, and I may reply to it personally.

"ANTI-HUMBUG."

THE RACE FOR THE HIGHEST STRUCTURE

By A. C. Light.

More or less impassive during the last fifteen years, content to allow the Woolworth building to reign supreme in height, New York has again broken out into a new strife for this supremacy. From 1913 until 1928 its reputation as the "highest building" in the world has remained unchallenged. The Eiffel Tower has always been a thorn in the side of record-breaking America, and was reluctantly admitted to be the highest structure. It has now been passed by the yet unfinished Chrysler building, though the addition of a rather incongruous spire, or, more correctly, spike, was necessary to achieve this much desired end.

Between 1913 and 1928 a large number of tall buildings have been built, but none higher than the 792 ft. Woolworth tower. It is possible that the accepted fact that this latter structure failed to pay more than 2½ per cent. on the investment prevented the undertaking of any loftier enterprises. The Equitable building was only 550 ft. high, and the Metropolitan Tower stopped at 700 ft. The Singer building attained 612 ft., whilst Detroit extended itself in the Penobscot building to reach 665 ft. Towards the end of 1928 there was a serious challenge to the Wall-street district for "skyscraper" supremacy by the 42nd-street district, around the Grand Central Terminal. Here the Chanin building was opened in February, 1929, and was quickly followed by the 10, East Fortieth-street building and the Lincoln building, all between 650 and 700 ft. high. The Woolworth building was still supreme. All were in the Grand Central zone, and it was here that the usurper of the Woolworth crown was to be built also.

The Chrysler building was originally announced to be "the highest building in the world," 808 ft. high, containing 68 floors and being 16 ft. higher than the Woolworth building. Thus a fifteen-year record was broken, and, whether it was foreseen or not, keen competition and a heated rivalry began less than a year ago. Since then, some amazing building projects have been put forward, and some of them started. The desire for the tallest building in the world amounts almost to a passion. Of course there is the cold reasoning of advertisement value, but, even for the United States, this is stretched to impossible proportions to satisfy the conscience of the victims of the craze.

Whilst the Chrysler building was in the course of construction the startling news came from Chicago that the Crane Tower, or the Chicago Tower, was proposed to be erected to a height of 880 ft. This bombshell in the Walter P. Chrysler camp awoke it to the stern nature of the contest it had started. At no price could Chicago (in the language of the country) be allowed "to get away with this." Furthermore, the Eiffel Tower was remembered, and it was decided to put this troublesome structure finally and firmly into the background. Every nerve was strained and incidentally every economic calculation, particularly the hypothetical return on advertisement, to the end that a new top was designed—in fact, several new tops, steadily growing in size if not in beauty, until, by means of a steel lattice-work snike, the building was stretched to the ultimate height of 1,030 ft. Instead of being 16 ft. it became 238 ft. higher than the Woolworth Tower, and this without the addition of any floors other than the pent house type. The triumph, if any, of the Chrysler building will be short lived, as already greater schemes are on foot.

The competition was taken up by the financial district and several small lots were assembled to provide sufficient area to allow of the erection of buildings of a competitive height. The Bank of Manhattan Co. and the Irving Trust Co. entered the lists. Whilst the Chrysler Building was in the course of erection these concerns cleared sites on Wall Street necessitating, among other things, the demolition of the famous "Chimney" at Wall Street and Broadway. The Bank of Manhattan Co.'s building was planned in May, 1929, to rise 836 ft. above Wall Street, and announced as such with the smug and hopeful remark appended: "It will be the highest in New York." This, of course, was before the Chrysler top began to grow suddenly. Not to be easily beaten, the Bank of Manhattan forced its growth, but failed to rise more than 925 ft. with 63 office floors and seven in the roof. Conditions are against the financial district recapturing the crown; the sites are too small. The attenuation of the tower of the City Bank-Farmers' Trust Co. (now under construction) is positively alarming, as it soars to 925 ft. To understand fully the handicap of a small site it must be known that, subject to minor restrictions, the zoning laws permit buildings to run up indefinitely as a tower when the area of that tower is not more than 25 per cent. of the area of the site. It is fairly obvious that with a smaller site and therefore a smaller area tower, an economic limit of height is much sooner reached and, ultimately, a structural one, too. With this in mind, returning to the mid-town district we find that, on the large site of the recently demolished Waldorf Astoria Hotel, former Governor Alfred Smith has commenced to erect the record-breaking Empire State Building. It will be finished in 1931, so that the Chrysler has exactly one year to reign before abdicating in favour of ex-Governor Smith. Will the latter's reign be as short as Chrysler's, or as long at Woolworth's? Already there are threats in the air.

The Empire State Building, if it does not decide to grow, will be 1,100 ft. high to the top of its 85 stories, which will be surmounted by a 300 ft. high dirigible mooring mast. Whilst solitary in its 350 ft. superiority of height, it is just possible to imagine the Graf Zeppelin or the R100 tied up to it, but, there presents itself a picture of the early future with an airship attempting to worm its way through numerous other 1,300 ft. buildings in an endeavour to tie up and discharge its passengers through the bowels of the Empire State Building into the canyon that was Fifth Avenue.

Thus after fifteen years of undisputed supremacy the Woolworth Building suddenly will have been surpassed by at least five "skyscrapers" in New York, and that by no mean margin, but generously and substantially overtopped by some 150 to 250 ft. The spring of 1931 will see completed a structure rising to very nearly twice the height of the dethroned monarch, reducing it to insignificance. The effect of this sudden growth on New York is a subject in itself. The "sudden" growth is confined to the record-breaking class of building. There has always been constant building in the forty-story range during the last sixteen years, slightly accelerated towards 1928 and 1929 by the growth of the Grand Central district.

The idea will probably be scorned by the "hard-headed" American business men, but, whether he cares to admit it or not, the passion for the "highest yet" has been the incentive behind the towering heights to which the latest buildings have been forced. There has been written article after article on the height limit question, suggesting one after another deterrent to higher buildings. The structural limitation faded some time ago. Now it has been calculated that the maximum theoretical engineering height for steel frame structures, using the present formulæ and building laws, is 7,000 ft. The calculated economic limitation was not so easily disposed of, though recent investigations for the American Institute of Steel Construction on high buildings states that buildings of 75 stories are not only economical but "under present circumstances" will return more on the investment than a building of 50 or 30 stories in height. Of course, it is very simple to see why this should be so assuming a sufficiently large site. It is more difficult to believe the statement that the cost of construction per floor of a 20-story building is the same as that of a 70-story one. The contractors say that financing is the only thing preventing larger buildings (by which they mean higher, as all seem to think in terms of height rather than actual size in New York). Naturally the moneylenders will wish to know firstly (and lastly), "Will it pay?" The chief deterrent to higher buildings now seems to be the inability to assemble property to provide a sufficient area of land. One hundred stories have been calculated to be about the economic limit on one city block, but in busy districts it is almost impossible to assemble a whole city block. It is strange that the onus on the city of conveying all the hundreds of thousands of workers concentrated on a few acres by the "skyscrapers," the burden on its water supply and drainage, or the deterioration of surrounding property, does not seem to be considered as a possible limitation. As was said before, congestion is out of the scope of this subject.

This is not the end. With the moan that it is impossible to assemble even one city block under one ownership comes the news that someone (he is, of course, known) has actually assembled two complete blocks just north of and almost neighbour to the Woolworth building. The owner of this property is reported to have stated that he proposes to build on it a 150-story building, rising to 1,600 ft. above Broadway. Unless the authorities prevent it, the Woolworth building reaching less than half-way, will cower at the side of this monstrous neighbour. There are two redeeming features: one is that apparently the leases of the property do not expire for eight years, so that the proposal need not be taken too seriously. In eight years one can hope for changes in values and in the "space market" that may materially influence the height. The second ray of hope is that the authorities can and may see fit to prohibit the bridging of the street between two blocks which would be necessary to the scheme, and which it seems is expected to be permitted.

There is something in the American which makes him gaze with reverence on anything, however ugly or unattractive, which can call itself (of its particular kind) "the biggest in the world." The smallest "city" usually manages to find something in its possession which it can call the "largest in the world," though it very often does so without the slightest regard for truth. It is impossible to foresee to what heights their structures may soar when the strength is realised of this craze, this "record-breaking" passion behind the undeniable financial power and constructional and financial ability of the men who build in New York.

Birmingham Central Fire Station.

Plans for Birmingham's new central fire station have been approved by the Watch Committee. It was stated that the accommodation to be provided exceeded the dimensions at first thought sufficient, and that it would be necessary to move the Weights and Measures Department entirely from the site at the bottom of Corporation-street. The total expenditure on the building and equipment was now estimated at £162,375.

Record Canadian Building.

Building authorised in 61 Canadian cities last year had a value of $234,944,549, a greater total than in any year since the record was begun by the Dominion Bureau of Statistics in 1920. The figure for 1928 was $219,105,715, and for 1927 it totalled $184,613,742. Wholesale prices of building materials averaged 92 per cent. as compared with the 1926 index number of 100 and with 93.1 in 1928 and 96.1 in 1927. The index number of wages in the building trades, prepared by the Labour Department, averaged 197.5 in 1929, as compared with 185.6 in 1928, and 179.3 in 1927. The 1913 figures are the base, equal to 100, upon which the latter indices are computed.

ILLUSTRATIONS

PLATES

House at Wendover.

This house, which stands between Wendover and a spur of the Chilterns, is nearing completion. It is built of orange-coloured bricks with hand-made roofing tiles, the latter supplied by Messrs. Williamson, Cliff and Co., of Stamford. The scheme includes the garden layout. The house has been designed to secure a maximum of sunlight, one of the features being the double garage with study over. Messrs. H. J. and A. Wright, Ltd., of Great Missenden, are the contractors, the electrical installation being by Messrs. Cash and Co., of Westminster, heating installation by Messrs. William Edgar and Sons, of Hammersmith, and special door furniture and ironmongery by Messrs. Whiteside and Co. Mr. Allgrove, of Langley, near Slough, is carrying out the garden scheme from the plans provided by Messrs. Richardson and Gill, FF.R.I.B.A., the architects.

New Motor Company's Offices, Regent-street.

The Ford Motor Company's new premises at 88, Regent-street, W., are eight stories in height, and the exterior is of grey Portland stone. On the ground floor is an arc of plate glass rising nearly two stories, surrounding a massive dark polished granite setting, in which the doors give entrance to the main showroom. This showroom is of striking design, consisting of a continuous seascape, made of thousands of pieces of vari-coloured marble and mosaic. The upper part of the showrooms is in silver and gold, the gold mosaic of the piers merging into green as they "fan" towards the ceiling. The ceiling is composed of 81 coffered panels, the whole being covered with silver metal leaf. Glass stars are let into 45 of these panels. At the further end of the salon is the lift, enclosed in a wrought-iron and glass grille, and approached by a flight of black marble steps. Here, too, is a series of archways with marble columnar supports leading to the showrooms in the rear. Another arcaded story surmounts them, with a balcony from which the salon below may be seen. The floor of this balcony is of glass, in curved panels, and at one end there is a marble fountain. Three other large showrooms are incorporated in the building. One of these, on the ground floor, at the rear of the main salon, is panelled in oak. The entire mezzanine floor, where the decorative scheme resembles Caen stone, will also be used as a showroom. The entire first floor is also given over to showrooms, having mahogany panelling surmounted by special plaster work. A car lift on the Glasshouse-street side of the building will bring in the cars for these showrooms and will also give access to the basement. On the second floor are the chairman's office and boardroom suite. These rooms are carried out in polished walnut and silver enrichment. The floor is also of walnut. On the third, fourth, and fifth floors are many offices, large and small, a number panelled in mahogany. On the top floor of the building is the conference hall, with a seating capacity for more than 80 people. The main central stairs are constructed entirely of fire-resisting materials, and every window or screen adjoining them is glazed to give similar protection.

The general contractors are the Western Construction Co., and the following are subcontractors:—London and Wales Steel Con. Co., steelwork; Caxton Floors, Ltd., floors; Samuel Elliott & Sons, joinery throughout; Wiggins-Sankey, slates; Thos. Parsons, paint; John Hall & Sons, distemper; Veroness, Ltd., plasterwork, general and special (Marb-l-cote); G. N. Haden & Sons, heating; Waring, Withers & Chadwick, electrical installation; Relay Automatic Telephone Co., internal telephones; Stitson, White & Co., plumbing and sanitary fittings; Haywards, Ltd., iron escape stairs and pavement lights and deck lights; Henry Hope & Sons, steel windows and roof lanterns; United Stone Firms, Ltd., Portland stone frontage; Empire Stone Co., precast stone to back elevation and precast stone staircase; Art Pavements, Ltd., main staircase and floor tiling; Marble Mosaic Co., lavatory partitions and floors; Fenning & Co., marblework; Haywards, Ltd., balcony; Waygood-Otis, Ltd., car lift and passenger lift, lift enclosure; General Electric Co., Osler & Faraday, and Best & Lloyd, electric fittings; White, Allom & Co., boardroom suite decoration; Shannons, Ltd., special fittings; David Rowell & Co., metal work in basement; Mather & Platt, hydrant service; Milner's Safe Co., strong-room door and fitting; Light Metal Work, Ltd., steel doors; G. & A. Brown, Ltd., fibrous plaster, main showroom decoration, main showroom front to Regent-street and special lift enclosure (metal work by Bagués, Ltd.); Fenning & Co., granite work; Samuel Elliott & Sons and Thos. Firth & Sons, metal frame work; Floorcraft, Ltd., boardroom floor; Fram Reinforced Concrete Co., general floor finish in cork; Cashmore Art Workers and Morris Singer Co., wrought iron work; A. E. Davis, ironmongery throughout; A. L. Gibson & Co., shutters; Gilbert Seale & Co., stone carving; Minton Hollins & Co., tiling.

The quantity surveyors were Messrs. Josling & Hamlyn; the consulting electrical engineer, Mr. L. R. Morshead; and the architects, Messrs. Chas. Heathcote & Son, of London and Manchester.

[Note: The shop front and main showroom were designed by Mr. Gerald Brown (Messrs. G. and A. Brown, Ltd.) in collaboration with Messrs. Charles Heathcote & Son.]

Memorial Church, Catterick Camp, Yorks.

This church was designed as a memorial to Roman Catholic soldiers who fought in the Great War. It was to be constructed of grey random local stone, with dressings where required, and a green slated roof. The plan takes the form of a Latin cross, with a nave and transepts, aisles, chancel and side chapels. The dome over the crossings of the transepts is somewhat unusual, as the lighting, instead of being from the top, is from the sides over a low transept arch, allowing a large flow of light to the interior, with large raking buttresses giving an effect of strength to the walls of the dome.

Mr. John B. Mendham, F.R.I.B.A., is the architect.

"Cunard House," Leadenhall-street, E.C.

The new London offices of the Cunard Company are to occupy a site covering an area of 17,000 sq. ft. The building will consist of ground floor and seven upper stories, in addition to a lower ground floor, basement and sub-basement. The height of the building from the pavement to the top of the cornice will be 90 ft., and the sixth and seventh floors, instead of being provided with a sloping roof, will have vertical walls, giving a pleasing effect both externally and internally. The frontage to Leadenhall-street will be 122 ft., and there will also be frontages to Creechurch-lane (140 ft.), Bury-street (117 ft.), and Sussex-place (about 176 ft.), this last being irregular. The main entrance will be in Leadenhall-street, and over the large, semi-circular arched opening will be a central window, with balconies at the second and third floors, while surmounting the sixth and seventh floors will be a cartouche. The Leadenhall-street façade will be of Portland stone, which will also be employed for the ground floor of the frontage to Creechurch-lane, while the remainder will be of cream Carrara ware. Mr. S. Bylander is the consulting engineer for the constructional steelwork; Messrs. Selby and Sanders are the quantity surveyors; and the contractors for the retaining walls and foundations are Messrs. Trollope and Colls, Ltd.

Messrs. Mewès and Davis are the architects.

"High Holborn House."

"High Holborn House" is a large office block, extending back to a frontage in Bedford Row, with a return frontage to Brownlow Street. The plan shows a typical floor divided into separate office suites, but owing to the large superficial area covered by the building, it has been possible to modify the plan of certain floors to accommodate important firms requiring large general office space on one story. Owing to the restricted width of the High Holborn frontage, expression could not adequately be given on this façade to the size of the building in the rear, except by emphasising as far as possible the height of the entrance, which has been broadly treated. The stories have been defined by a horizontal treatment and the fenestration arranged with a view to express the purpose of the building. Owing to the low elevation of the adjoining buildings, it has not been possible to obtain any continuity of architectural treatment, but the strong horizontal line of the main cornice and mansard roof indicate what will probably be the general height and trend of future rebuilding.

The general contractors are Messrs. Allen Fairhead and Sons, Ltd., and the sub-contractors are as follows: A. D. Dawnay and Sons, Ltd., steelwork; Caxton Floors, Ltd., fireproof floors; The Empire Stove Co., cast stone; H. and F. Badcock, plastering; G. Jackson and Sons, Ltd., decorative plastering; Richard Whittington and Co., Ltd., heating installation; Grierson, Ltd., lighting installation; Le Grand, Sutcliffe and Gell, Ltd., artesian wells; Smith, Major and Stevens, Ltd., and Marryat and Scott, Ltd., lifts; Fenning and Co., Ltd., and The Stone and Marble Co., marble work; J. Starkie Gardner, Ltd., decorative metalwork; W. James and Co., Ltd., metal casement; Ames and Finnis, roof tiling; The Ragusa Asphalte Paving Co., Ltd., asphalting; The Luxfer Prism Syndicate, Ltd., pavement lights; Joseph F. Ebner, composition flooring.

Mr. George Vernon, A.R.I.B.A., is the architect.

Birmingham Hospital Centre.

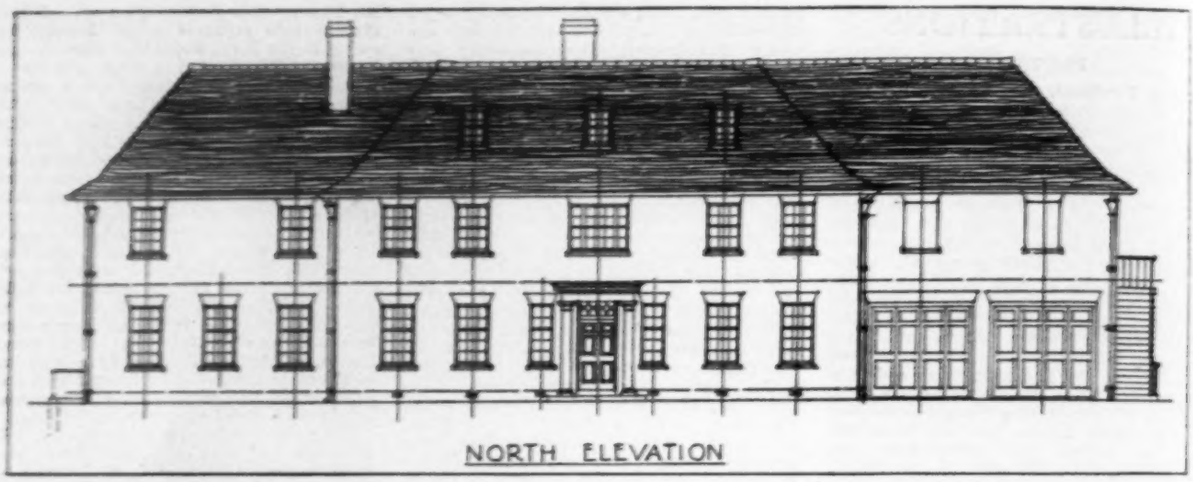
The design of Messrs. W. and T. R. Milburn, FF.R.I.B.A., in this competition was placed fourth jointly with that of Messrs. Pite, Son and Fairweather, which we illustrated last week. The competition was reviewed in our issue for January 31.

FACADES*

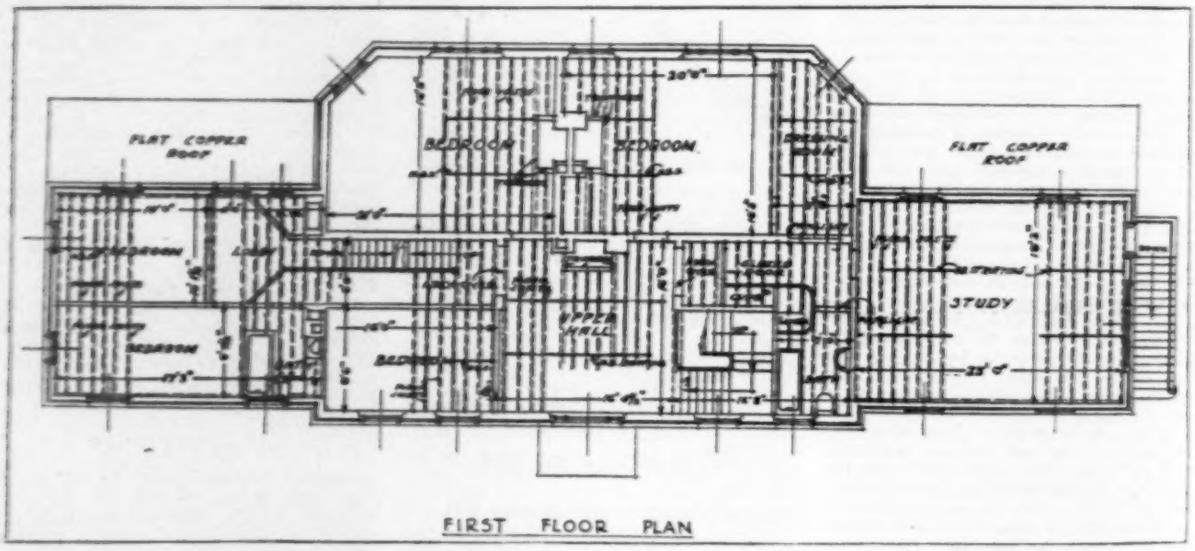
THERE is a great deal to be said for this fine collection of five hundred illustrations arranged by Mr. Werner Hegemann. No apology is given for the word "façade," which is anathema to the modernist school, nor is there any love shown for "expressionist orgies," "romantic impressionists," "grotesque experiments," and "dynamic constructivists." In the introduction it is realised that the question as to what is a good or a bad façade is affected by personal tastes which differ widely. For this reason the question can only be answered in a personal and therefore not very conclusive manner. We have a clue to the author's attitude when he tells us that clearness, simplicity, and dignity must prevail, and that "as in the use of our mother tongue, all noble forms are not necessarily bad to-day because they were good a hundred years ago." In another place he justifies a façade thus: "because the artistic effect of a building for the town-planner is more important than the pedantically precise expression of its interior needs, to meet which the building was designed."

We have said enough to indicate the author's catholic point of view. Apart from some interesting comments upon harmony and discord in rows of façades, and harmonious continuity of pillars and openings, he leaves the numerous photographs to speak for themselves. Altogether this is a very interesting and valuable collection. It would have been even more valuable, we think, with the addition of an index of the titles of the buildings, or the various countries under which the buildings are grouped.

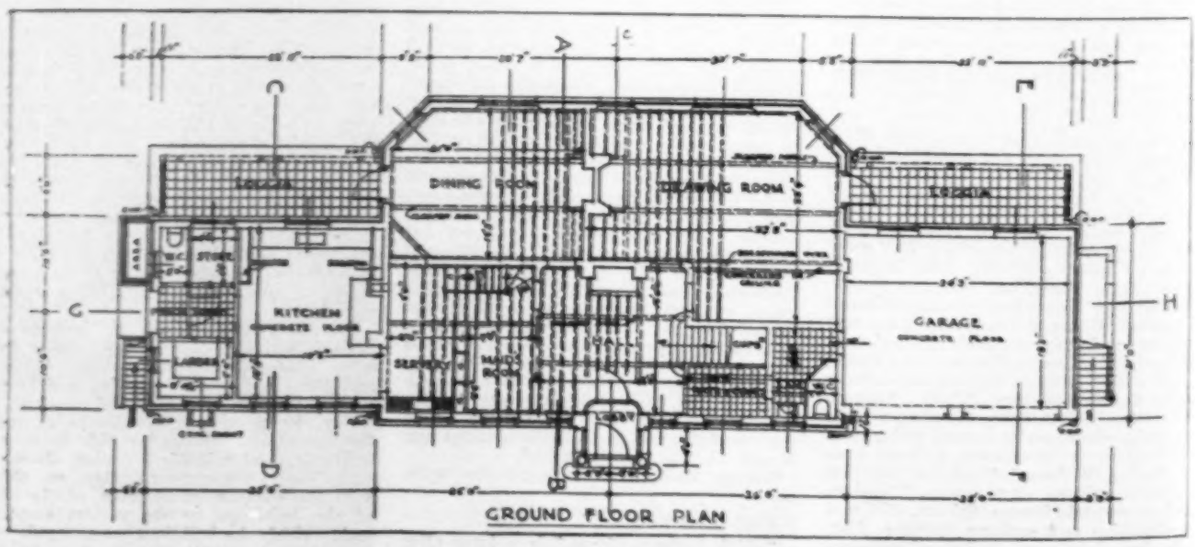
**Façades of Buildings.* London: Ernest Benn, Ltd. 42s. net.



NORTH ELEVATION



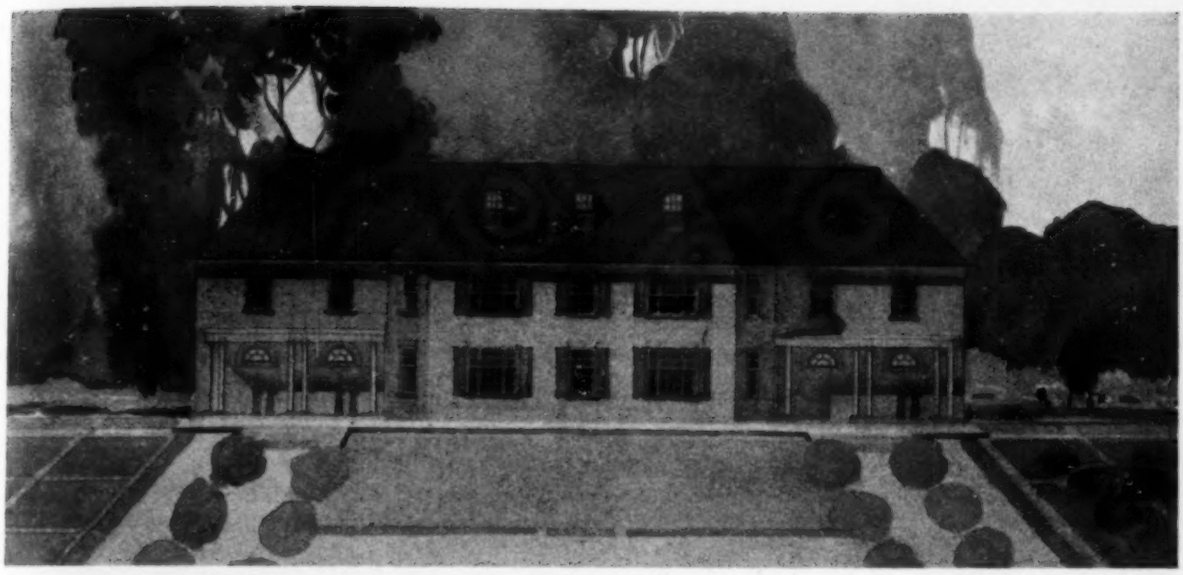
FIRST FLOOR PLAN



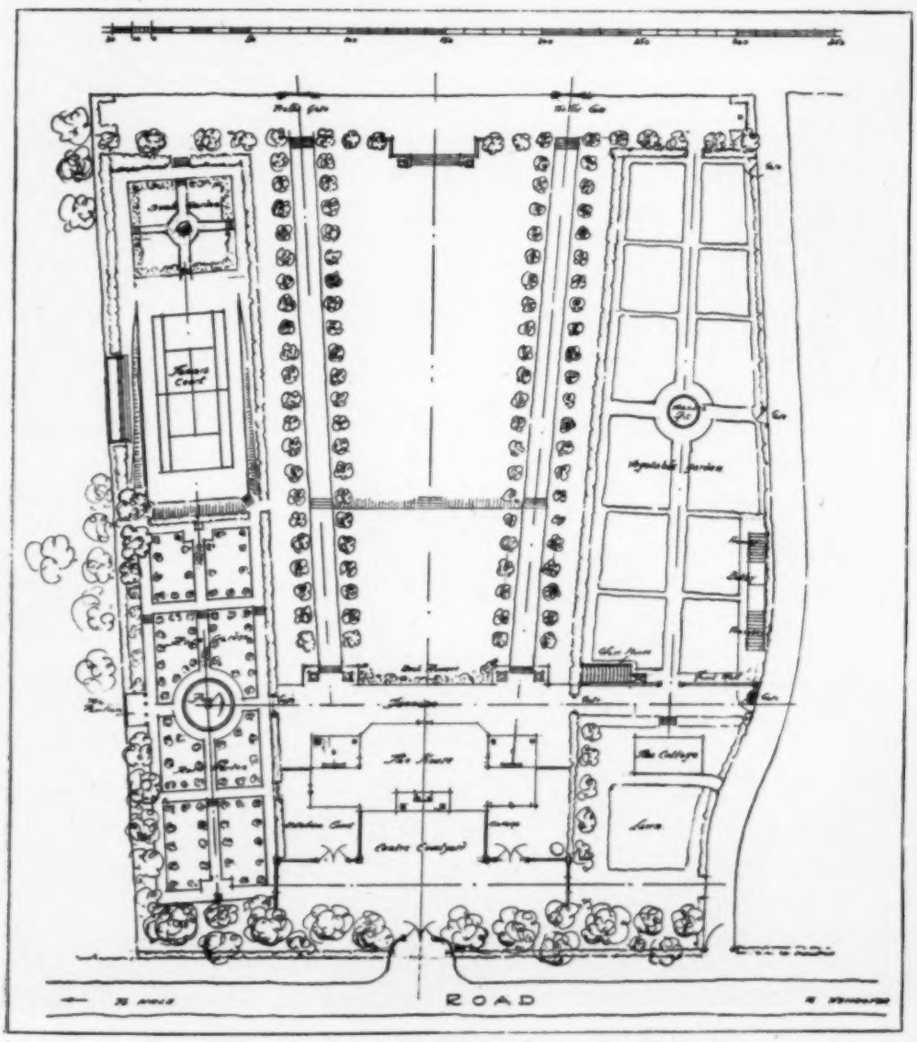
GROUND FLOOR PLAN

A House at Wendover.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.



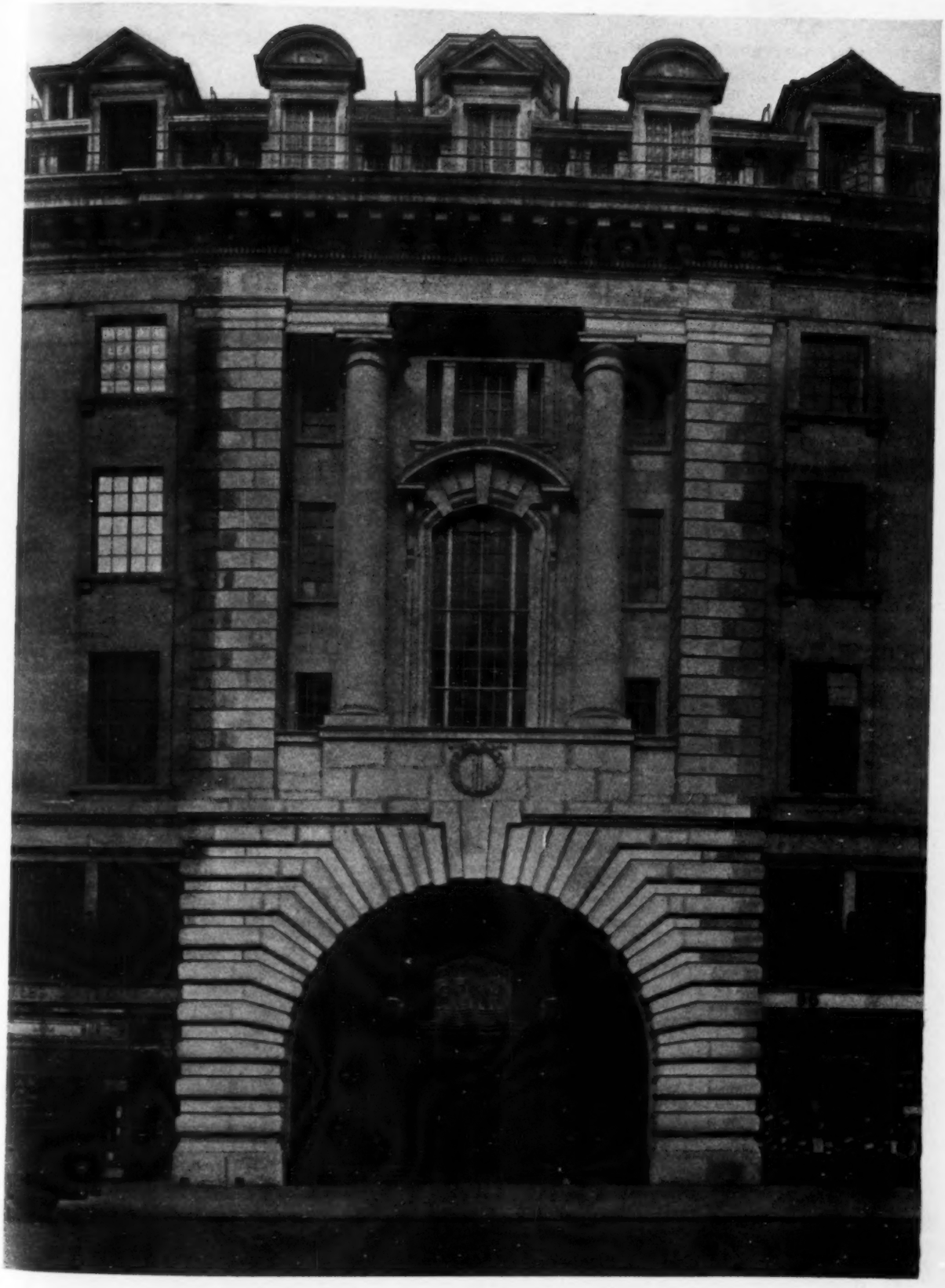
PERSPECTIVE VIEW OF GARDEN FRONT.



PROPOSED SCHEME FOR PLANNING OF GARDEN AND GROUNDS.

A House at Wendover.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.

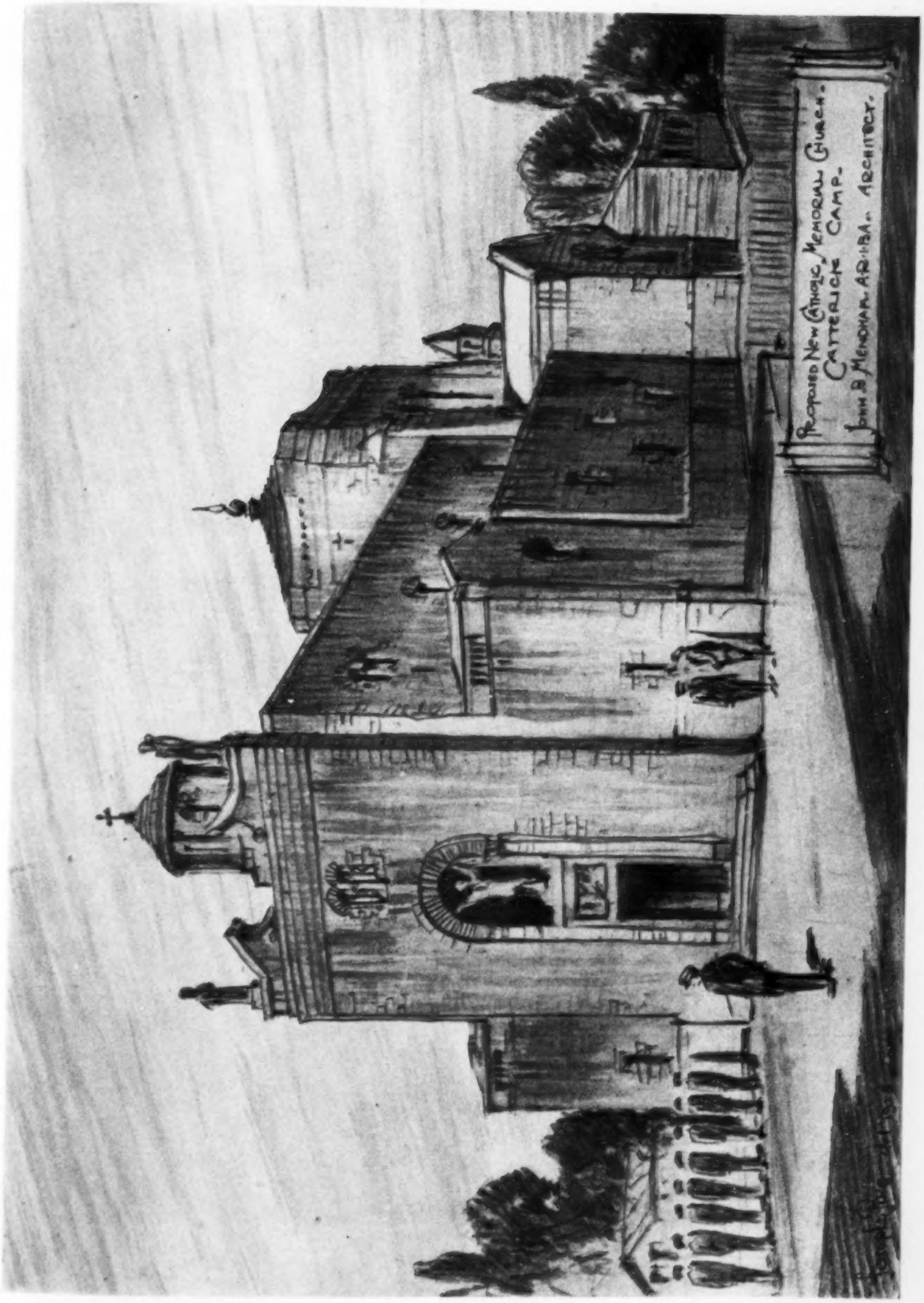


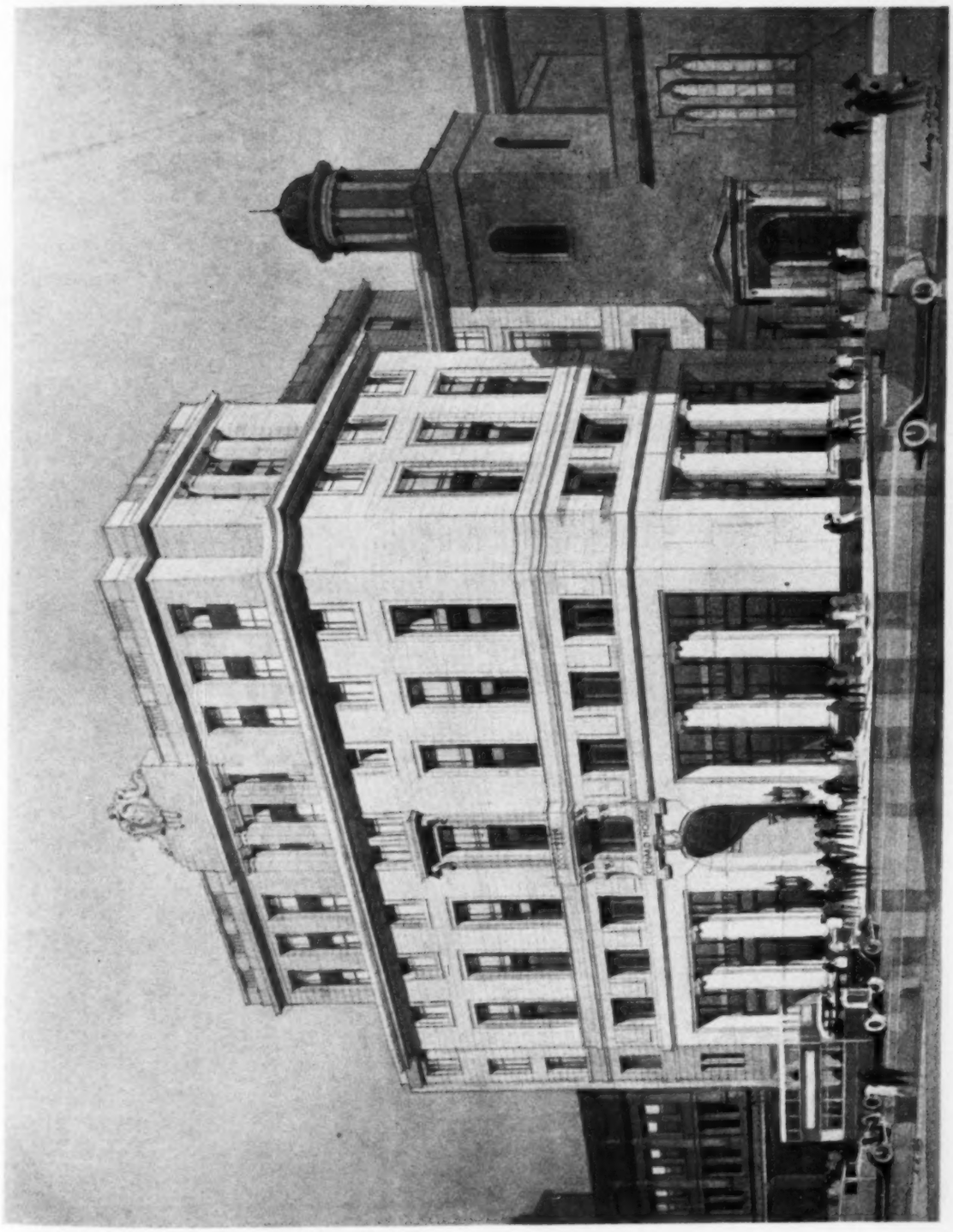
New Motor Car Showrooms, Regent Street, W.

MESSRS. CHARLES HEATHCOTE AND SON, Architects. (Shop Front in collaboration with MR. GERALD BROWN.)

New Motor Car Showrooms, Regent Street, W.

MESSRS. CHARLES HEATHCOTE AND SON, Architects, in collaboration with MR. GERALD BROWN.

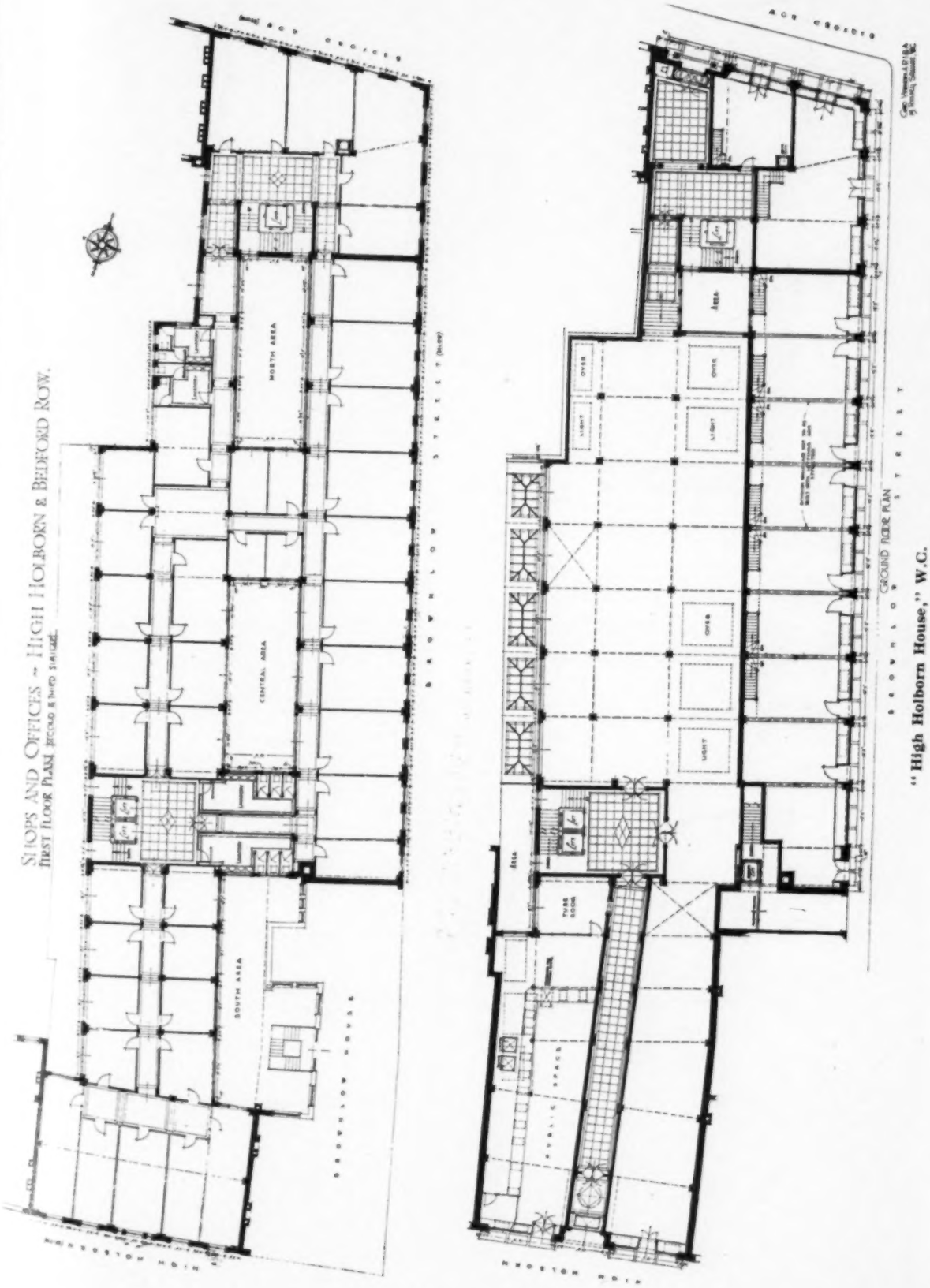

PROPOSED NEW CATHOLIC MEMORIAL CHURCH.
CATTERICK CAMP.
JOHN B. MENOHAN, A.R.I.B.A. ARCHITECT.



"Cunard House," Leadenhall Street, E.C.
Messrs. Mewès and Davis, Architects.

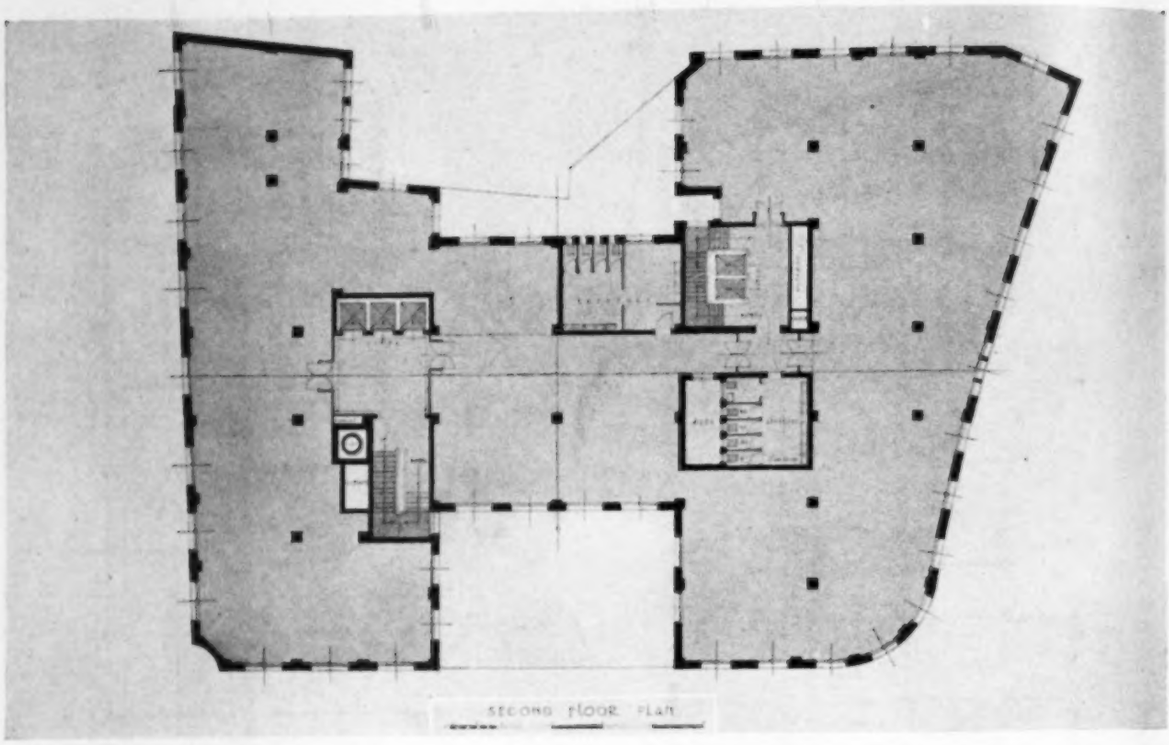
"High Holborn House," W.C.

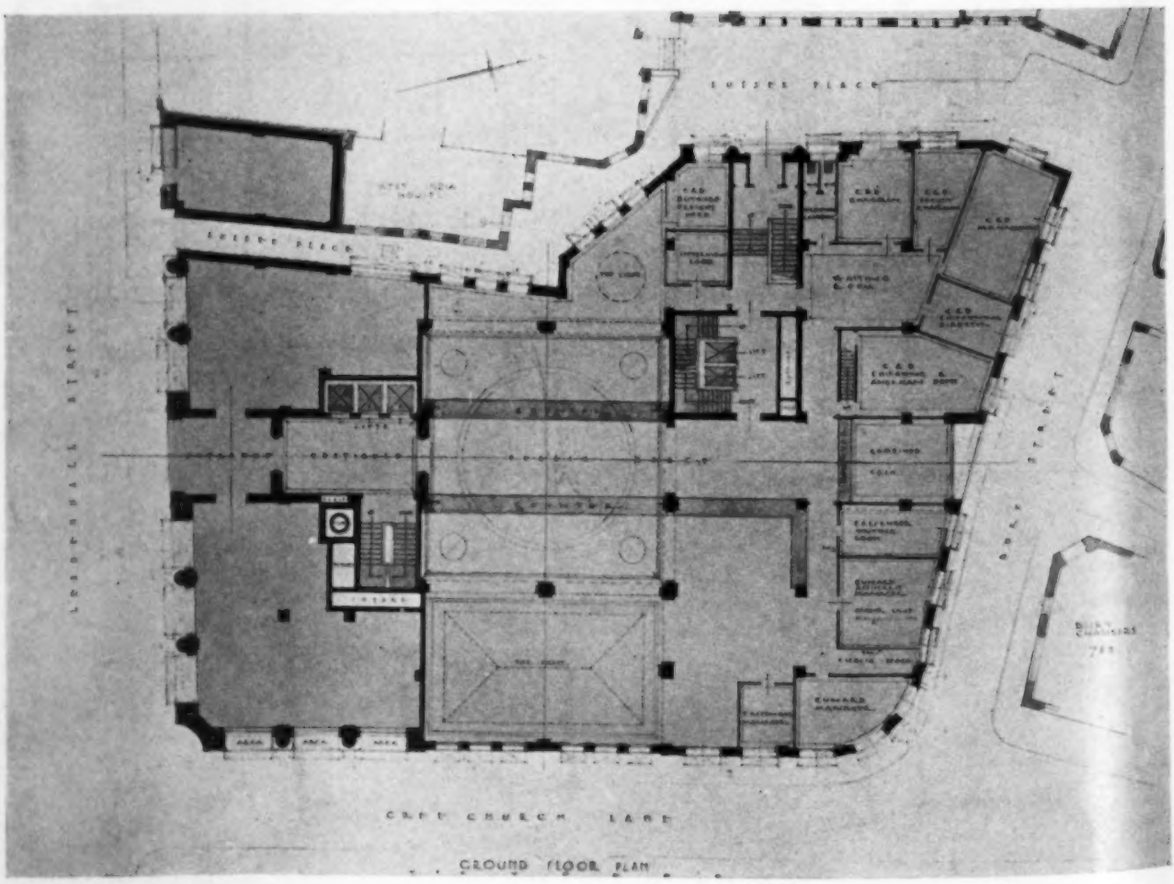
Mr. George Vernon, A.R.I.B.A., Architect.



"High Holborn House," W.C.

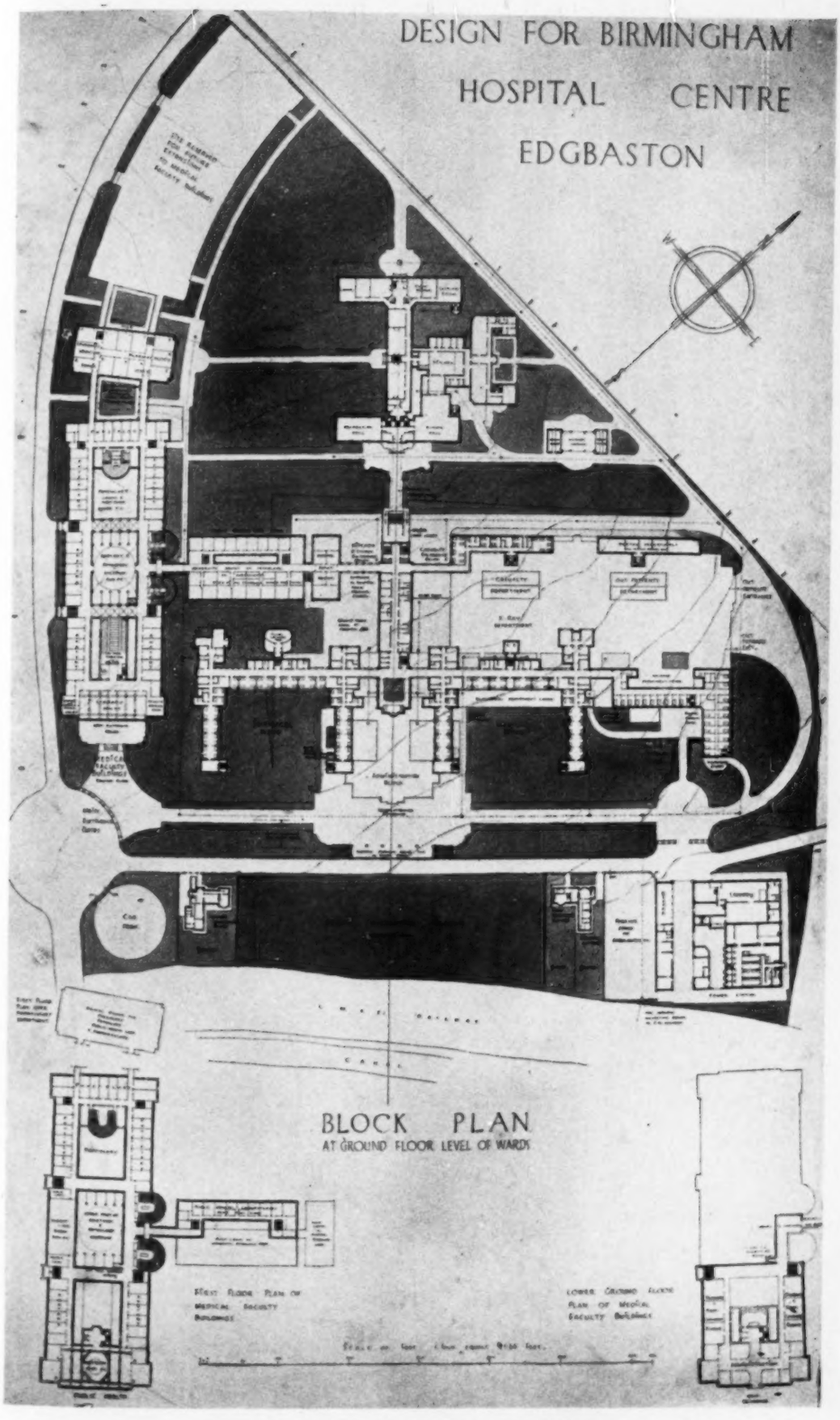
Mr. George Vernon, A.R.I.B.A., Architect.





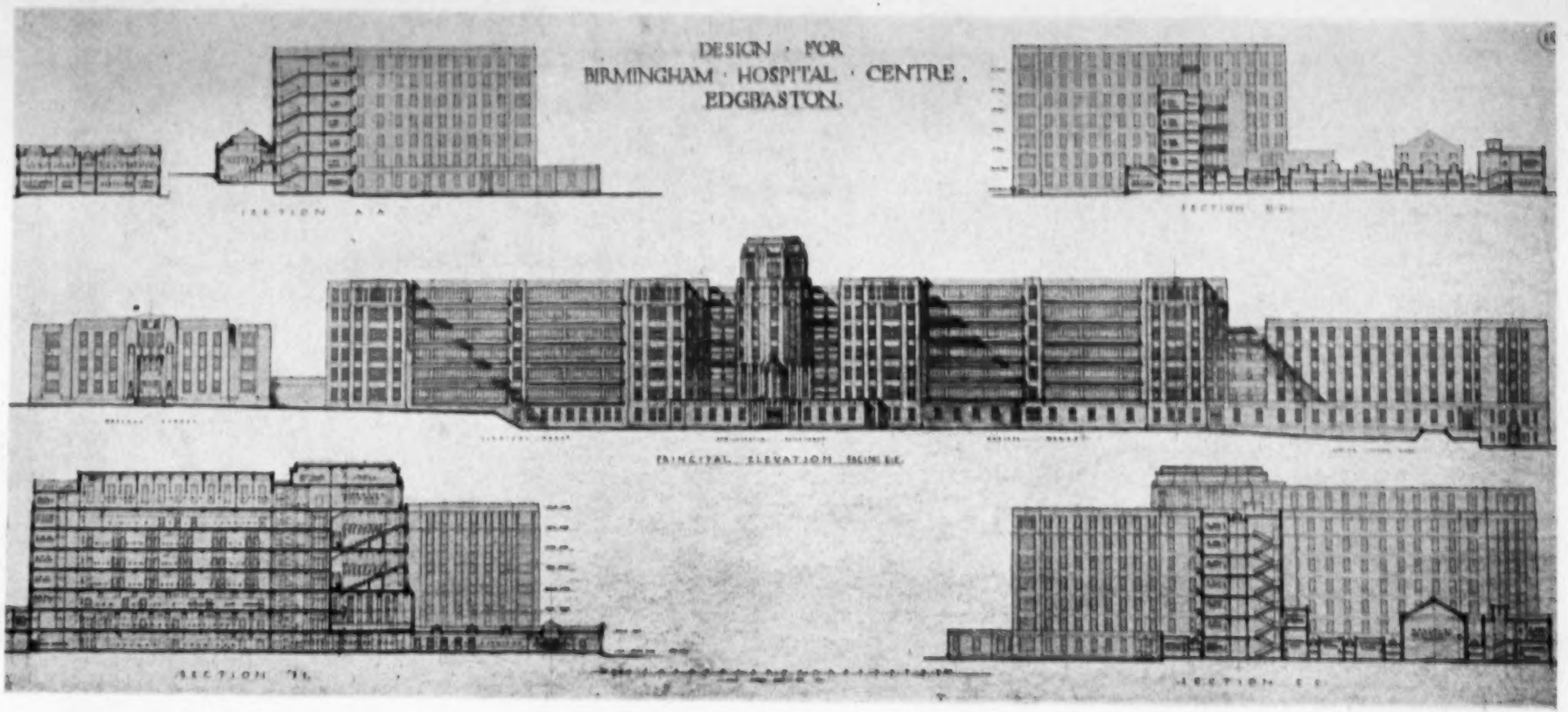
"Cunard House," Leadenhall Street, E.C.

MESSRS. MEWÈS AND DAVIS, Architects.



Competition for New Hospital Centre, Birmingham.

Design submitted by Messrs. W. & T. R. Milburn, FF.R.I.B.A.



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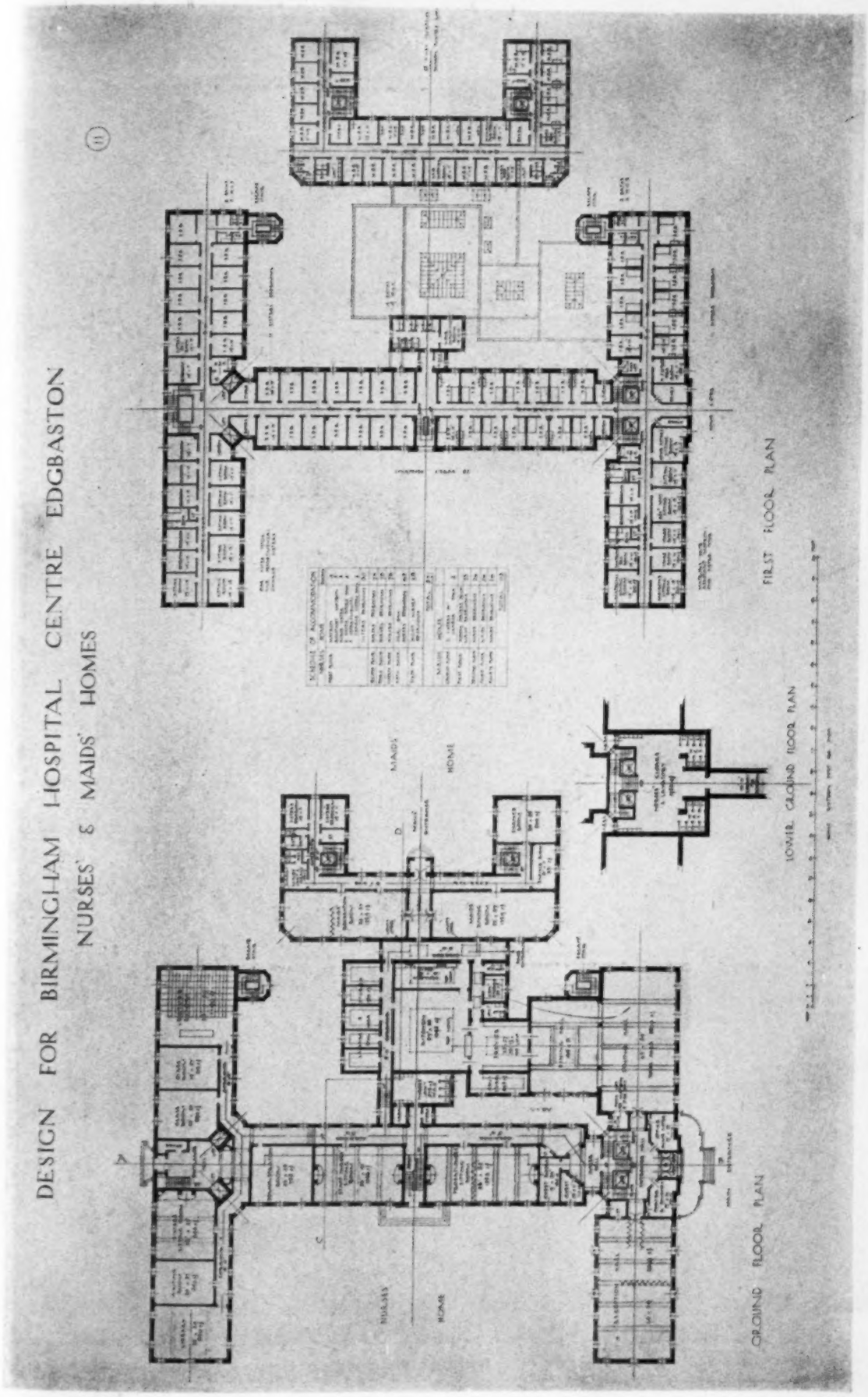

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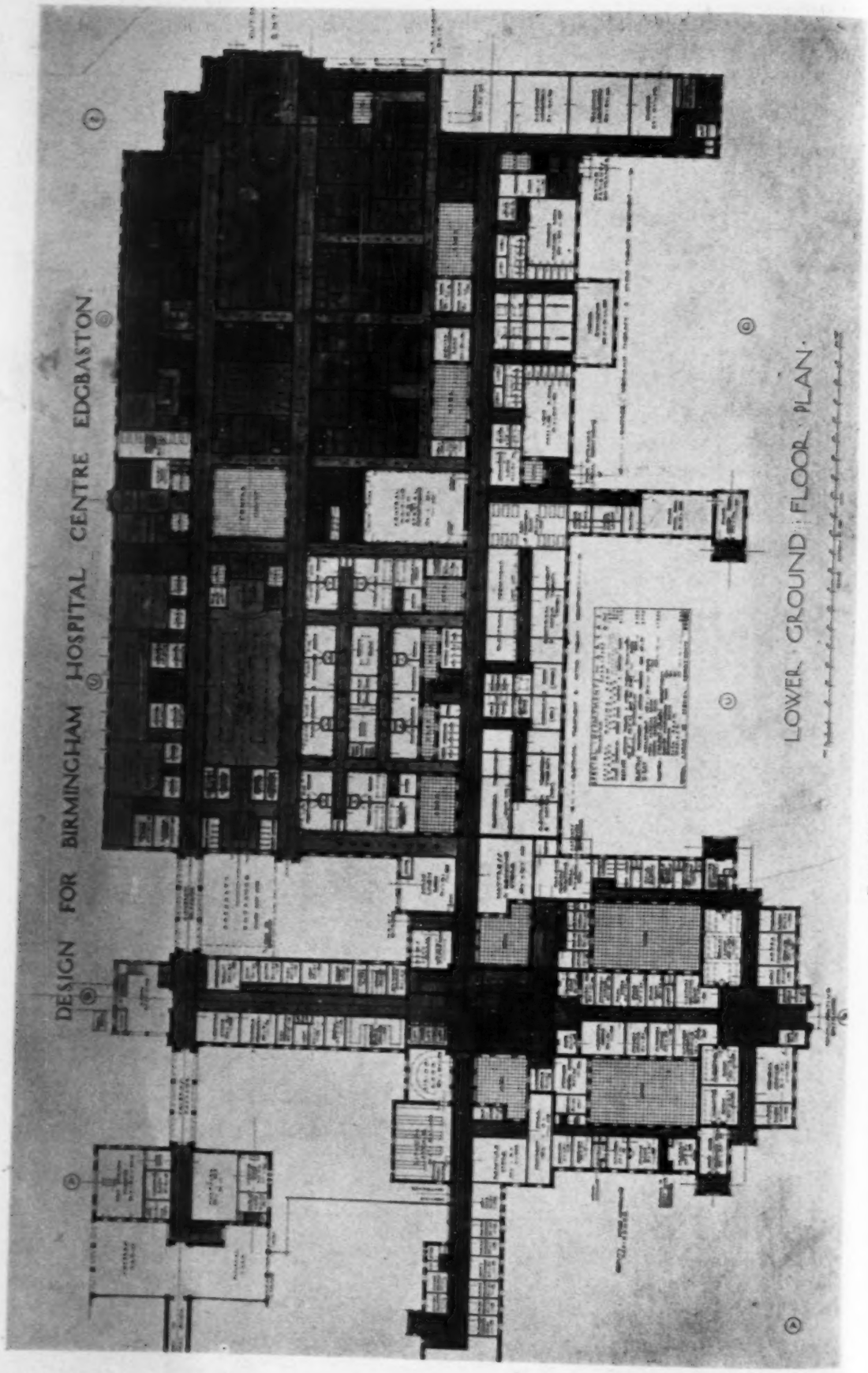

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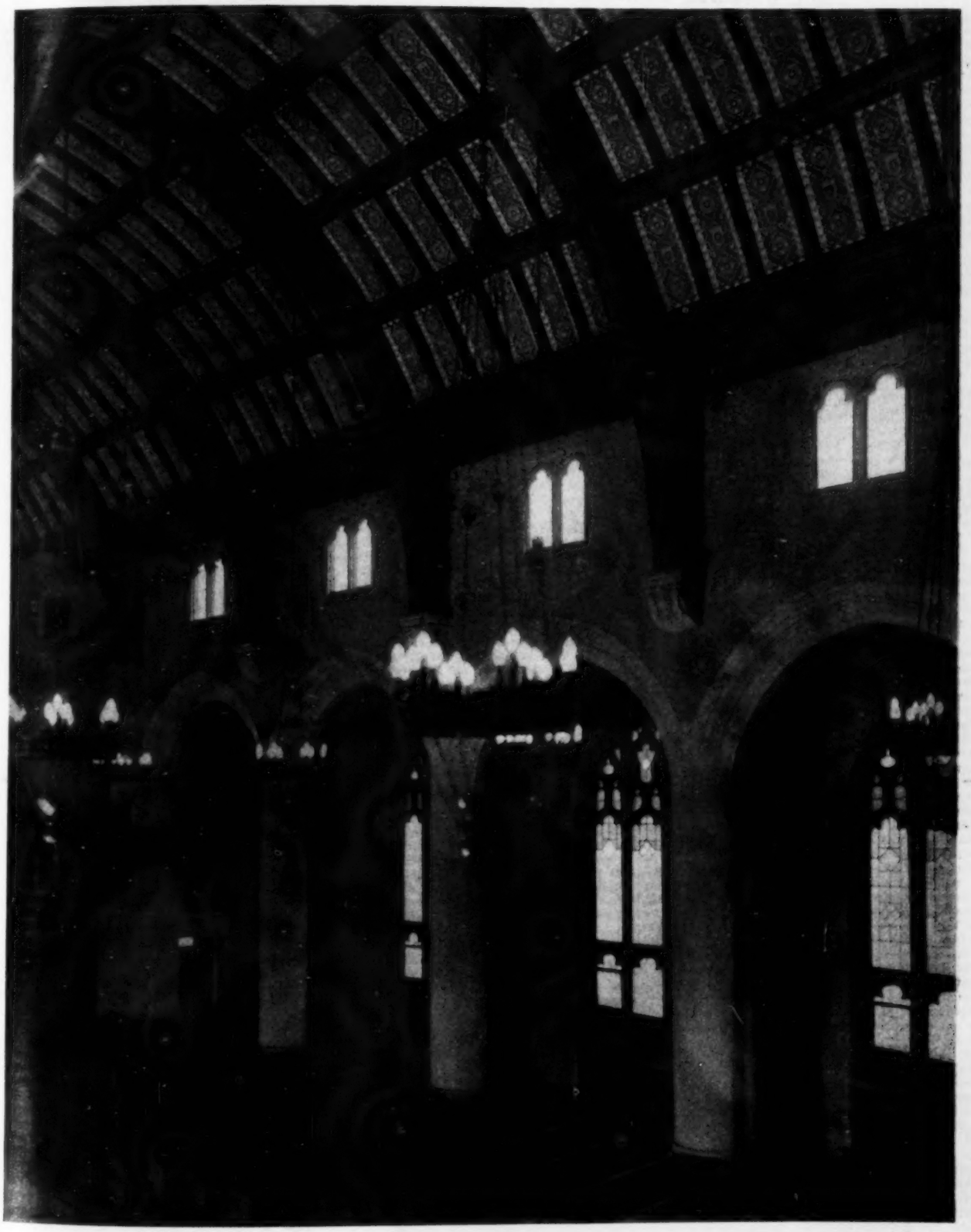

Fig. 15—Bryn Mawr Church.

TREATED WITH PERFORATED CANE FIBRE BOARD FOR ACOUSTICAL CORRECTION, AND STENCILLED FOR DECORATION.

ACOUSTIC CONSTRUCTION—IV.

By C. W. GLOVER, A.M.Inst.C.E., M.I.Struct.E.

Alternative Acoustic Linings.

The details given on Fig. 12, published last week, show suggested acoustic linings for the music room under consideration. Whilst it is claimed that the arrangement shown will give excellent acoustic results, yet it is readily admitted that the use of other materials properly proportioned may be equally satisfactory.

For example, the resonant wall panels could be replaced by absorbent panels of the fibre board type, provided they were fixed in such a manner as to keep them structurally free of the main wall, and not so rigidly fixed as to prevent elastic yield to the force of the sound vibrations at the lower frequencies. The walls generally could have been covered with hair-felt appropriately decorated with porous wall-paper, or could have been covered with quilted eelgrass, seaweed, rockwool, cork, or other similar materials. The ceiling could also have been formed of decorated cane fibre board, wood-pulp board or hair-felt, rockwool or asbestos acoustic felt supported on perforated steel sheets. Alternatively, the ceiling could have been covered with acoustic plaster and the walls lined with acoustic artificial stone.

Each method has its particular advantages, but, in the opinion of the writer, those linings which can be fixed independently of the main walls are to be greatly preferred to those which are usually fixed direct to the structure like hair-felt.

Constructional Details.

The separation of the lining from the main walls of the structure not only greatly improves the sound insulating properties, but also increases the absorption provided by the lining. If the reader will refer to Fig. 5 (see first article of this series, March 21) he will see that the sound incident upon an absorbent surface suffers reflection, refraction and transmission. As we have already seen, a very large proportion of incident sound is reflected. The absorbent sound is taken up in the form of heat energy brought about by friction of the air particles on the porous surface, and also by inducing mechanical vibration of the absorbent itself. It will readily be appreciated that the actual velocity of movement of the particles of vibrating air will be reduced to zero at the point of contact with a hard reflecting surface, such as the wall of the music room. If therefore, the absorbent is fixed a few inches clear of the wall, the velocity of the air particles in the sound waves will be greater at the surface of the absorbent than if the absorbent were in contact with the wall. The absorption of sound by the generation of heat in the absorbent is therefore likely to be much greater.

If we now consider the sound transmitted through the absorbent we shall see on reference to Fig. 12, that this is subject to inter-reflection between the interior surfaces, and the interior as well as the exterior surface of the absorbent will assist in the absorption of sound energy. With the particular absorbent shown on the plan, this is of a special advantage, as the straw will be left rough on the inside, will not be covered by a membrane, and will therefore have a larger coefficient of absorption than the outer surface.

Draped Walls.

Heavily draped walls should be avoided, as the upper partials of complex tones are cut off, and the auditorium "goes bass." The higher frequencies of speech sounds are essential to intelligibility, and must therefore not be lost by deadening out the room with drapes. If drapes are used to provide additional absorption after the walls have been treated, these are best hung in "banner" form, bunched up to about 18 in. wide, close to the wall and projecting outwards from them. In this position, they provide *additional* absorbent area, and they break up the wall reflections. It is a mistake to hang drapes over an absorbent wall; they should be hung outwards as described above.

The Ceiling.

As we shall see when we come to consider the insulation of sound, and particularly with regard to the prevention of transmission of sound from one room to another through the floor, a suspended ceiling is a necessity. The ceiling should, of course, be suspended from the upper floor at frequent intervals, in order to provide adequate stiffness without the necessity of introducing heavy construction.

In the opinion of the writer, a timber frame suspended on sheathed bolts gives the best results. The top end of each bolt should be provided with a large washer which takes its seating on a pad of fibre board, so as to produce a cushioning effect and prevent the transmission of acoustic vibration to the structure, or mechanical vibration from the structure to the ceiling.

which would sound the note corresponding to the frequency of the vibration transmitted. No doubt many alternative constructions will suggest themselves to the reader, but the foregoing principles should be adopted if effective sound insulation is to be obtained.

Figs. 13 and 14 show a type of ceiling construction developed in America by the Johns-Manville Corporation, and which

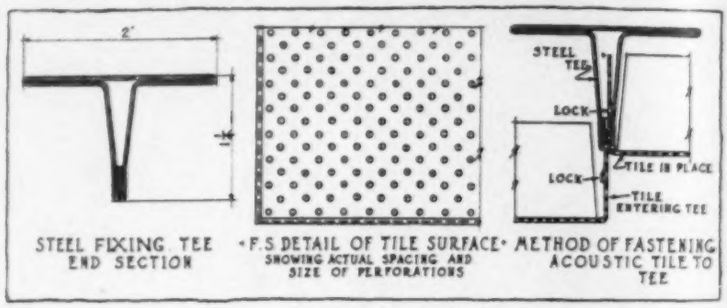

Fig. 13.

gives excellent acoustic results. The construction has the added advantage of being fire resistant, and readily lends itself to a variety of artistic treatments. The tiles are filled with a sound-absorbing material, such as felt, rockwool, eelgrass, or the like, and are forced into position from the underside of the ceiling, the lock on the tile preventing its direct withdrawal. It can, of course, be removed by sliding it lengthwise along the fixing tee.

The construction fixed direct to the ceiling beams obviates the use of lath and plaster.

Finishes.

In the decoration of acoustic lining, the greatest care must be taken to avoid sealing the pores of the absorbent surfaces, but, on the other hand, reflecting surfaces should be finished with hard, glossy paint or polish in order to increase their reflection of the upper partials. Acoustic fibre boards are best left untreated, but if various shades are desired, the surface should be treated with a good quality water or spirit stain.

Acoustic Paint.

Special acoustic paints can now be obtained. These do not seriously impair the acoustic qualities of the surface on which they are applied, but cannot, of course, be expected to impart additional sound absorption. The paint is applied with a sponge and crystallises upon the fibres of the absorbent treated without sealing the pores of the surface, and the decorated board has an absorption coefficient not materially less than that of the untreated surface. Perforated membranes are best decorated by means of a paint pad which, saturated with the paint or stain, is applied to the surface.

A gentle patting will transfer the colour to the surface to be treated, and the suction formed by the perforation will break the film of paint over it when the pad is withdrawn. This will leave the paint on the surface of the acoustical treatment without penetration into the perforations or openings. Another method of surface treatment of acoustic lining is to apply the paint with a sprayer, and after it is dry to go over the surface with a roller covered with needle projections at very close intervals, so that the decorated surface is perforated.

Stencilling has in the past played a prominent part in the cheaper form of decoration of acoustic linings. Fig. 15 shows a typical example of this type of work.

(To be continued.)

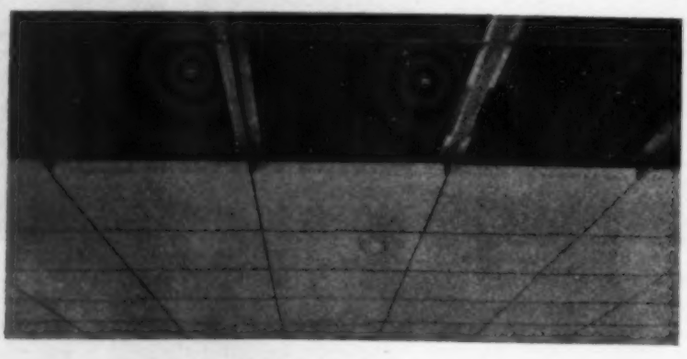

Fig. 14.—Sound-absorbing Ceiling Tiles.

CHARING CROSS BRIDGE

MR. ARTHUR KEEN'S LECTURE.

In the course of a lecture before the Carpenters' Company, Mr. Arthur Keen, F.R.I.B.A., Chairman of the Thames Bridges Conference, outlined the case against the official scheme. The very strenuous opposition that had been offered to the passage of the Bill was not due to any desire to prevent a bridge being constructed, but simply to the fact that the matter had been regarded merely as a local matter of a bridge and a railway station instead of a problem in town planning applied to a built-up area in the very heart of London and affecting in a very vital way areas and conditions outside the immediate site of the undertaking. A bridge had been talked about for many years past, but practical politics began with the failure of one of the piers of Waterloo Bridge six or seven years ago. The engineers to the L.C.C. took a very serious view of the matter and stated that the shattered state of the pier made it necessary to take the bridge down. A new bridge for six lines of traffic was then recommended. The London County Council adopted that recommendation and immediately a most insistent opposition to the destruction of the bridge was begun. This resulted in the setting up by the Prime Minister of a Royal Commission charged with the duty of reporting especially on Waterloo Bridge and the proposed St. Paul's bridge, but also to investigate the whole matter of cross-river traffic in London. Amongst other things the Commission found that to underpin Waterloo Bridge would be less dangerous than to pull it down, and that a new big bridge, but not at Waterloo, was necessary in order to solve the traffic problem. The proper place for this, the Commission said, was at Charing Cross. Not only did they recommend this new bridge, but they took their courage in both hands and showed by means of plans how it should be done. It was to be a double-deck bridge with the railway station below, arriving at the level of the Strand in a new railway station roughly on the site of the present one. The roadway was to be above and was to pass over the Strand on a bridge and to deliver at the Cavell statue at St. Martin's-in-the-Fields. It was a most remarkable scheme, said the lecturer, bold, imaginative, and very skilfully handled, but as a contribution to the convenience and amenity of London an impossible one. It was well received, and the scheme was sent to a committee of engineers for consideration and report.

As usual, the æsthetic aspect of the matter was, in point of fact, overlooked. The engineers dealt very faithfully with the matter and produced a very interesting report in which they gave qualified approval to the scheme, but showed certain ways in which it might be improved, and then they went farther and produced a third scheme of their own on an entirely different principle, with the railway station removed to the south side of the river and the bridge carrying road traffic only. Shortly after this they did another unexpected thing: they made a third plan with the railway station still on the south side but facing the river. He wanted, said the lecturer, particular attention to be given to that, because that variation in the scheme was the cause of most of the opposition offered. The site originally assigned by the engineers to the new station was that of the present Waterloo Junction station, with such additional land as was necessary for a big terminus. This meant that the station would be a twin to Waterloo—a sound and reasonable arrangement. A station on the river front would be hopelessly out of touch with the present one. In July, 1928, this third plan was sent by the Ministry of Transport to the London County Council and was approved.

The plan was not published, but a copy was obtained. The bridge started on the high ground at the Cavell statue and was simply a viaduct a mile and a quarter long. It was impossible to get off it for half a mile in either direction except into the railway stations. It went over the Strand, the Embankment, the river, Belvedere- and York-roads, Waterloo-road twice, Mitre-street, and over the New Cut, finally coming to ground with two long sloping ramps, a quarter of a mile long, each having a narrow street by its side to receive the little cross streets which were cut off, some six or seven of them. If one wanted to get on to the bridge from these cross streets one had to go back to the end of one or other of these two sloping ramps. These were really two wide roads but without any buildings on them, and together they were equal in length to Regent-street from Oxford to Piccadilly Circuses. Could one imagine that length of main road in the heart of London without shops, houses, offices, or any other kind of building? It was the same with the rest of this viaduct: a great part of it had one or other of the railway stations adjoining it, but no sites for buildings to bring back some of the tremendous outlay involved in construction and compensation. On the north side the sites were poor, shallow ones, quite unfit for important buildings. The scheme, in short, had been conceived like a railway, *i.e.*, a raised road to carry traffic between two point 1¼ mile apart, without reference to the ordinary uses of streets in cities.

When the character of the official scheme was realised, the most serious criticism was applied to it; this criticism was directed against the elevated roads, waste of frontages, the kinks and bends in the road (eight changes of direction within a mile), costliness of the construction, and many other matters. A plea for architectural consideration was refused on the ground that the question did not arise at that moment (this was when the plan of the Royal Commission was sent to the Engineers' Committee for report). In reply to this it was pointed out that the most serious architectural considerations of all were those arising at the very beginning, connected with alignment and level, access, with the shape and size of the building sites, with grouping and composition, and so forth. But all to no purpose, the engineers went on their way unmolested. Now what did this final plan involve? "The whole problem was a town-planning one involving roads and traffic, railway accommodation, a river frontage, and a vast public improvement in relation to an out-of-date district in the heart of London. Yet no notice had been taken of the Town Planning Institute and the Greater London Regional Planning Committee. The simple fact was that the scheme had been wrongly submitted to the Ministry of Transport when it should have gone to the town-planning authority, the Ministry of Health.

The bridge as it now stands started at the Strand instead of going over it. There was a large "place" for the circulation of the traffic, and it meant the purchase of Coutts' Bank and other very valuable properties. Again, a second roundabout close to Trafalgar-square was surely a thing to avoid if possible. The plan gave no facilities for local movement; the Adelphi was shut off by a sudden difference of level and had no access to the bridge; there was no connection to the Embankment. The whole of the traffic was concentrated on the Strand at perhaps its busiest part. The junction of the road with the bridge over the Embankment was lop-sided and undignified, and, architecturally, the most serious question arose at that point. The bridge was in the neighbourhood of many of our chief buildings. The fine sweep of the Embankment was one of the finest things we possessed. The view was cut in two at present by the railway bridge, but in line and colour and composition with Waterloo Bridge and Somerset House. Every care should be taken to preserve its dignity and enhance its beauty. The bridge could start off the Embankment instead of going over it.

On the south side, the official plan gave a continuation of the County Hall terrace forming a garden near the water level and above a road running parallel to the bank and forming the access to the railway station—all very good and proper. But a result was that the road ran inland with the boundary wall of a railway adjoining it for a long distance. When the road got free of the railway it ran down with a sharp curve and a steep slope—not at all a good arrangement for business premises in mid-London. This was all on an elevated road, for the new road passed, of course, over the terrace garden by the river. This was unavoidable, but instead of this covered-over part extending for a mere 100 ft. as it might do, it was made 260 ft. long by the rather useless arrangement of the cross road above. Then Waterloo-road ran into a tunnel 405 ft. long and only 17 ft. high, and this, moreover, in two spans. Various other cross roads also became tunnels at that point, and tunnels in the middle of London were an emphatic nuisance for they sterilised the whole frontage on both sides of the road. The loss of recoupment to meet the cost of construction was a terrible bar to this scheme. All these ingenious things were unnecessary. They were merely being done so that the new station and Waterloo Station should be approached at platform level. The tail was wagging the dog. All the district between Westminster Bridge and Blackfriars Bridge was an unknown land. A fine thoroughfare, the direct route from Westminster to London Bridge Station, would result also in opening up and developing the district.

It might fairly be said, "What is wrong with the official scheme has been pointed out, but no alternative has been offered by you except in vague and general terms." This was fair comment, and it was quite true that one could not get rid of anything effectively until one had put something in its place. He would content himself with two schemes—a high-level and a low-level. A good high-level one was by Professor S. D. Adshead. It had the dignity and directness and the general balance and symmetry that brought a lay-out into the realm of fine architecture. It provided a way up from the Embankment, gave a double access from the south, put the railway terminus centrally on the axis of the bridge, and provided a fine composition of buildings at the point where the bridge met the bank. A last point of practical consideration was that in this scheme the bridge could be built at once. As regarded a low-level scheme (in which the bridge started off the Embankment) it was a principle that a bridge, to have its utmost usefulness, should start at the water's edge so that the approach roads should, if possible, radiate from the bridge head. A low-level bridge at Charing Cross involved lowering the roadway of the Embankment for part of its width to allow trams and traffic to pass under, and raising the rest of the roadway with a gentle slope so as to get on to the level of the bridge. The cross-bridge traffic began to disperse in five directions as soon as the bridge reached the north bank. On the south side the bridge came to ground at York-road. This was very important because it allowed a fine open thoroughfare running parallel and near to the river. The new station stood back at right angle to Waterloo Station, facing squarely down the line of the bridge. It had a cab yard linked up with that of Waterloo, and this connection over Waterloo was the only overhead construction at all. By utilising such a scheme the length of the lay-out was reduced, cost was reduced, re-housing of people displaced was reduced, and the whole thing was dignified and important from the point of view of architecture.

Personally, said the speaker, he felt that two things should be regarded as essentials in the scheme for this bridge. First, the station should be set back on a site adjoin-

ing Waterloo, so as to have no tunnels under it near the river; secondly, that the bridge should come to ground at York-road, so as to enable South London to be approached by open thoroughfares and a direct way opened from Westminster to London Bridge Station to enable the river frontage to be properly used. One other point he wanted to speak of—the bringing of passengers from the South of London right through to the Strand and thereabouts, if possible without changing carriages. He understood that it was fully possible as an engineering proposition to have a terminus by Waterloo, if desired, but to drop the local line after leaving London Bridge Station and take it under the river to Charing Cross and round in a loop and back to London Bridge. It might be expensive, but it ought to be done as part of a general policy of welding together the north and south. The time for elevated railways in cities had gone by. The official scheme with all its defects had gone a long way towards being adopted. It would be a costly mistake if it were carried through, and he would conclude, said the speaker, by expressing the hope that wiser counsels might yet prevail and steps be taken along the only right lines by securing a perfectly sound lay-out proof against criticism from all aspects, and designed to meet the utmost convenience and well-being of the public, while enhancing the beauty and dignity of the official district of the central city of a vast empire.

PROCEEDINGS IN COMMITTEE.

When the Committee of the House of Commons on the Charing Cross Bridge Bill resumed its sittings under the chairmanship of Sir Henry Cautley.

Sir Edwin Lutyens, replying to counsel for the promoters of the Bill, said he had been forced to the conclusion that the only practical site for the new railway station was the one proposed in the Bill. He was satisfied from the architectural point of view that this plan would be to the advantage of the area concerned. He had had regard to traffic, navigation and engineering considerations. He considered that the balustrades and cornices of the bridge itself could be constructed in masonry. The buildings to be placed on the south side of the river would set a standard for the development of that area.

Mr. F. D. Villiers Bayly (for Lambeth Borough Council) questioned Sir Edwin about his pictures representing the arcades to be constructed in Lambeth. The witness agreed that there was nothing very dissimilar between the neighbourhood of Vauxhall station arcade and the neighbourhood in Lambeth that would be affected by this Bill.

Counsel: Is there any reason why the arcade at Vauxhall station has not developed on the lines suggested in your pictures?

Sir Edwin Lutyens: I suppose they had not the chance of employing me.

Counsel: Then, it is having the advantage of your services that is going to convert people into building arcades like this. You will forgive us for being a little sceptical. In any case, you are unable to give the Committee any instance of covered roadways like these having been constructed?—No; but think of the new underground approaches to Piccadilly-circus.

Do you compare them with these covered roadways?—No, but the method of lighting and so on at Piccadilly-circus was quite a new thing that had never been done before.

Sir Edwin was then questioned as to the lighting of the arcades and said that the maximum amount of natural light would be obtained by having the roof sloping towards the centre from each end. There was enough space in the plans to provide for this. He also proposed that there should be flood-lighting, both day and night.

Mr. Maclaren (a member of the Committee): There would be condensation and sweating?—To a certain extent.

And that would cause corrosion?—Not with rustless steel.

Counsel then referred to "this little oasis"—the new circus to be constructed at the Lambeth end of the new bridge road—and asked whether it was a good thing to have a theatre there, as proposed in the model, in view of the constantly moving one-way traffic.

Sir Edwin said he was told that the Old Vic could not be put there. He had intended that there should be underground entrances. He could see no reason why buildings such as he had proposed in the model should not be constructed there. He had only put them there because he considered the site worthy of good buildings.

Counsel then referred to the site, comprising the proposed buildings between the County Hall and the new station, and suggested that it was a difficult site to deal with.

Sir Edwin: No; it is rather a nice site.

Counsel: Only so long as it can be dealt with as a whole?—No; that would not make it more difficult, but only more English.

What does that mean?—That it would be more haphazard.

Asked whether there was any architectural reason why the Waterloo Junction site should not have been selected for the new station, Sir Edwin Lutyens said that it would have involved the rebuilding of Waterloo unless they had a tangle of railway lines and different levels and gradients. He did not consider the new station would prevent the development of the area adjoining it.

At the conclusion of Sir Edwin's evidence it was announced that the vicar of St. Martin's-in-the-Fields, and others, had come to an agreement with the London County Council, and that their petition against the Bill would be withdrawn.

Sir Herbert Walker, general manager of the Southern Railway, was then called. He said that however good the present scheme were made, and however much it were modified, it would still inconvenience a certain number of the Southern Railway passengers, and the only justification for the removal of the present station was the wider national interest. They considered that the site now proposed would put their passengers to the least possible inconvenience, as compared with other sites that had been suggested. The railway company had abandoned the idea of ever amalgamating the South-Eastern and the South-Western services in one station at Waterloo. There were great engineering difficulties, and it would involve rebuilding Waterloo station, which had cost £2,300,000.

Mr. George Ellson, chief engineer of the Southern Railway, was cross-examined by Mr. F. D. Villiers Bayly, for Lambeth Borough Council. Questioned as to certain processes for deadening sound which it is proposed to use in the construction of bridges passing over roadways, the witness said that he did not know of any bridge where sound had been effectively deadened by these precautions. They could see the difference between bridges treated somewhat in the way he proposed and other bridges by comparing the Southwark-street bridge, which was a hard-road bridge, with some spans of the Borough Market viaduct by Southwark Cathedral, which had a ballast road. It was not very much more expensive. The process he had in mind was still experimental, but it was mainly a question of ballasting material.

In reply to Mr. Maclaren (a member of the Committee), Mr. Ellson said that there would be scaling stations, and a turntable in the curve of the line approaching the new station at points which would be close to the new circus at the Lambeth end of the bridge-road.

Mr. Maclaren: These will immediately overshadow the circus development scheme, and it suggests that there will be considerable steam locomotive traffic there.

The Chairman said that Waterloo station occupied 24 acres, and the railway was now taking another 8¼ acres in the same neighbourhood. "What do you think people will say in the future," he asked the witness, "when they see that this site has been developed by building 32¼ acres of railway station?"

Mr. Ellson: The present Waterloo station, vast as it may seem to you, is strained to the utmost at holiday times.

The Chairman: Undoubtedly this scheme is very convenient to passengers, but it means that the very finest site on the river is being given up to a railway station.

Mr. Ellson: For many years I have known it as a derelict site.

Commander Shanklin, river superintendent and chief harbour master of the Port of London Authority, was then called, and said that an agreement had been come to regarding the construction of the new bridge so as not to impede navigation. It had been agreed that the two arches of Waterloo Bridge, which were at present blocked, should be reconditioned and opened before work on the northern half of the new Charing Cross Bridge was begun.

Mr. Frank Hunt, valuer of the London County Council, was then called, and said that in Westminster 200 persons of the working class would be displaced from 47 houses under the scheme. In Lambeth, excluding accommodation provided in the Union Jack Club, 4,720 persons would be displaced from 628 houses. Apart from the riverside, there was a fairly dense population in the Lion Brewery site. Jesus College, Oxford, and the Ecclesiastical Commissioners owned most of the land affected by the scheme. The latter had the freehold of the Lion Brewery. As leases had fallen in along the south side of the river, the Ecclesiastical Commissioners had not renewed them, but had made short-term lettings.

The witness was then questioned as to the buildings to be erected at the new circus in Lambeth, and said he considered that such buildings as those in the model would be erected once a standard had been set by this scheme.

Mr. Frederick Palmer, consulting engineer, who considered the scheme jointly with Sir George Humphreys for the London County Council, was recalled, and laid before the Committee plans for a scheme by which the new station would be placed on the south side of the present Waterloo station.

Sir Lynden Macassey said that if the committee intended to follow out the plans for a station on the south side of Waterloo he would feel bound to recall Sir Edwin Lutyens and the Southern Railway witnesses who had given evidence regarding the scheme in the Bill.

The Chairman: We do not like the present scheme, with a road twisting about and all these viaducts. I do not see who can object to the station on the south side of Waterloo except the Southern Railway, unless it is that the "three pounds for one" contribution is an attraction which the London County Council cannot resist.

Sir Lynden Macassey: If you could get us the money for an alternative scheme we would consider it. It is the contribution of the Ministry of Transport that has made the scheme in the Bill possible. Take that away, and it becomes impossible. (It was stated later by Sir Lynden Macassey that the plan which had been put before the Committee by Mr. Palmer was obviously a matter that would have to be considered most carefully by the Southern Railway, and it was agreed that this should be done and the proposal discussed further.)

Mr. Frank Hunt continued his evidence. He said there was nothing in the Bill to block the future development of the Lambeth area.

The Chairman: That is a broad statement. So far as the road system is concerned it is right. Criticism is directed against the lay-out of the land adjoining the river.

The witness replied that the Council must have statutory powers for anything it undertook.

In cross-examination by Mr. Villiers Bayly (for Lambeth Borough Council), Mr. Hunt said that it was not the action of the L.C.C. in building the County Hall on the river front that blocked possibility of a through embankment on the Lambeth side of the river, but the fact that a roadway could not be carried under Westminster Bridge.

SOCIETIES AND INSTITUTIONS

ROYAL SOCIETY OF ARTS.

Building Craftsmanship.

On Wednesday, April 2, Mr. Nathaniel Lloyd delivered an address on "Building Craftsmanship" before the Society of Arts, at their premises in Adelphi, W.C. Professor Reilly occupied the chair and, introducing the lecturer, said Mr. Nathaniel Lloyd had made a study of that traditional and almost instinctive craftsmanship that was one of the great factors of our beautiful native domestic architecture. That craftsmanship was the ambition of other countries, especially of our cousins across the Atlantic, but we were gradually losing it. The time might come when we should have a new craftsmanship, that of the machine, but until this new craftsmanship was developed it was necessary that we should keep in touch with the old. If we were to save the countryside it was not sufficient to preserve old buildings; we must know the secrets of the old craftsmen, so that we should produce beautiful things ourselves.

The lecturer said that craftsmanship consisted of doing work in the best way to obtain the best results. It showed intelligent appreciation of form and materials, and respected traditional methods of treatment, but did not limit itself to these. In mediæval work the designer and the workman were combined in the same person, and often that was still the case to-day. More frequently, however, the design was now conceived and drawn by one person, and the fashioning out of material was done by another. One worked with paper, pencil, compasses and square; the other with compasses, square and cutting tools; but both might be craftsmen.

Illustrating his remarks by lantern slides, the lecturer showed a group of ugly cottages gradually transformed by raising the roof, altering the windows in number, size, shape and arrangement, making a larger and more ornamental doorway, replacing the Kentish hood over the door with a segmental hood, and so on. He then showed examples of the work of the tiler and slater, the bricklayer and the carpenter and joiner. His examples of the work of the tiler and slater included old roofs with swept valleys and bell-cast eaves, half-hip or jerkin-head roof, laced valleys, dormer windows, etc. Some slides showed old work, others the modern adaptations.

Bricklayers' work was illustrated by good and bad chimneys. A number of bonds showed the possibility of getting patterns by the way bricks were laid—monk bond, Dutch bond, stretching bond, Flemish garden-wall bond and English garden-wall bond were illustrated. Some of these, said the lecturer, were little used in this country. In the United States more was done than here in the use of brickwork to get ornamental effects in this way. A pleasant colour effect could be got by using grey headers. These were not specially made bricks, but were picked out of the ordinary heap. They were bricks of which the heads had been vitrified when burning. The stretchers used with these could be either the same kind of brick or red brick, and in either case an agreeable pattern in colour could be produced.

The work of the carpenter and joiner was shown by a number of fine examples of Tudor and later work, the great bay windows, linen panel doors and oak rafters of the earlier period being followed by work of the eighteenth century inspired by classical models. The illustrations were not confined to houses; a market stall at Shepton Mallet and a tumbling stile such as used to be made in East Sussex were among the things shown.

In a discussion that followed, Dr. W. Rushton Parker, speaking of what he had seen abroad, said he wondered whether it would be had taste to introduce into this country Chinese roofs or horseshoe arches?

The lecturer replied that a good deal depended on the material used: the pantile used in China was different from that used in this country. Apart from this, when something was brought from the East and introduced here it was apt to look not only foreign but fussy, and even somewhat "precious." It was rather dangerous to import foreign notions. The horseshoe arch was, however, used to some extent: for example, in the interior of Turkish baths.

Mr. W. J. H. Leverton said the lecturer had spoken of the difficulty of distinguishing between the designer and the craftsman. But this only applied to detail. A good deal of detail that had been shown on the slides was designed by the craftsman. To-day the architect gave full-sized detail, whereas in mediæval times the architect gave the general design and the craftsman designed the details. Hence there was more variety then than now. It would be a good thing if architects now had the craftsmen of bygone generations, and could concentrate more on design instead of having their attention frittered away on details.

Mr. A. Buckmaster said it should be possible to have standard patterns of doorways of good proportions, even copies of some of the best examples, for use in the ribbon development we were getting, and which development would go on, in spite of societies for the preservation of ancient buildings and lectures about the desecration of the country. We used stock patterns very largely now, especially in windows; why should not we have stock patterns in a decent style?

The lecturer replied that the question opened a field which was worthy of being explored. He had long thought that the production of buildings was divided too much amongst different classes of persons, each class working in its watertight compartment. The architect worked in one way; the builder not working under an architect worked in another way. The man who supplied stock details for the use of builders did his own designing and worked in his own compartment. If we were really going to improve the work of the jobbing builder, now devastating the country, it would be necessary for the architects and the people who erected the buildings complained of to come together. The architect could teach the speculative builder a great deal, while the speculative builder knew what to cut out to save a shilling, and so on. Very few architects were working close up against the extraordinary cutting of costs which the speculative builder had to practise, and if architects designing small buildings were in closer touch with speculative and jobbing builders, more would be done to improve this kind of building than could be done by other means.

A member of the audience said it would be a good thing if architects got more away from their drawing-boards and spent more time on the supervision of buildings.

The Chairman said he agreed. The architect who made the greatest success was the one who went out most. The case of Sir Edwin Lutyens was an interesting one. As a child, not being strong, he was brought up at home instead of being sent to school, and was able during the rebuilding of an aisle in the parish church to play about with the builders and experiment with the materials. Thus had arisen his interest in building. The divorce between architecture and building had begun with the Renaissance, when design had become a mystery in which the architect specialised. The formalisation of design that started then had its good effect when architects published notebooks, and the designs in these were copied in doorways and elsewhere, as had been shown on the screen. Mr. Buckmaster had suggested that something of the kind might be done to-day, and, in fact, books of standardised design were now published, but if they were to be accepted by the builder they must fall in with the taste of the times. In the eighteenth century everybody was affected by the formalisation of life, and there was a ground landlord with authority. To-day the speculative builder had a different kind of client, who had not a background of formal culture, and had to put on the market something to catch the passer-by. Supposing that a dozen of our best architects turned out a series of designs of small houses costing no more than the speculative builder's houses, still the public would have to be educated up to the new houses. But that was no reason the attempt should not be made. Not only were books of design being published, but there was a scheme for panel architects like panel doctors, a series of designs being supplied at a cheaper rate.

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS.

"London's River."

As we recorded in our last issue, a presentation dinner to Major R. I. Tasker and Mrs. Tasker was given at the St. Ermin's Hotel, Westminster, on March 28, under the chairmanship of Alderman Ewart G. Culpin (President of the Association). The dinner was followed by a lecture by Mr. George Topham Forrest, F.R.I.B.A. (Superintending Architect, L.C.C.), on "London's River." Having dealt with the historical aspect of the river, the lecturer said that to many of us the stretch of river between London Bridge and Westminster constituted London's river. He reminded them, however, that London's river was something much bigger. It was the Port of London, and within that port were nearly 3,000 acres of docks and on its waters the vessels coming and going during the course of one year had a total tonnage of 55 millions, and the value of the ingoing and outgoing goods in those vessels was more than £700,000,000. Some thought of London's river as between London Bridge and Westminster, and what a wonderful stretch that was. To stand on Waterloo Bridge and look Citywards was to see something unequalled in any city of the world. To stand on Westminster Bridge and look towards the Law Courts was to see a great pyramid of buildings. But there was a most significant difference between this pyramid and the pyramids of a forgotten civilisation. The latter were monuments to the dead; that seen from Westminster Bridge was a monument to the living. And more than that it had something about it which suggested the vigour and virility of youth.

So much for the north side of London's river. The south side was belated in its development, compared with the north, owing to physical disabilities, and for centuries it was the City's playground. Prior to the nineteenth century practically the only area along the southern boundary built upon was Southwark. The approach to London Bridge had been a place of residence for centuries. Bermondsey and Lambeth, however, remained meadows until the industrial era. To-day, all the southern side was closely packed with houses of all sorts, in striking contrast with those on the northern banks. Henry James, writing in 1887, said: "Few European cities have a finer river than the Thames, but none certainly has expended more ingenuity in producing a sordid river front." This was, unfortunately, still true of the southern bank, but he hoped it was not going to be true much longer. In the redevelopment of the south side we had an opportunity for rational improvement on a big scale, unequalled since that afforded in the City of London by the Great Fire. The greater part of the property was either obsolete or of so mean a nature, that its replacement must only be a matter of very few years. There were a few main routes well planned and directed, which must remain. The rest of the street network, however, for about a mile from the river had just "happened." In his view, it was not only a blot on the heart of London, but a source of great loss from the point of view of the commercial and business interests of the city.

As citizens of London, as part of the great host which owed everything to the

Thames, we felt, however, that the river's banks should be as near perfection as possible, her paths the noblest we could plan. Sometimes he tried to imagine what he would have done if he had lived in the beginning of the industrial era and had been given a free hand in the development of the south side of the river. He would have had to face certain facts. An obvious one was the absence of natural banks to the greater part of the river, not only from London Bridge to Westminster Bridge, but away beyond through Lambeth and Battersea and still further westwards. In the case of the Seine in Paris, and the Tiber in Rome, the embankments were doubled, partly naturally and partly artificially. There was a lower or quay side and an upper roadway or promenade. On the northern side of the Thames the higher level of the Strand and City would have rendered a double embankment comparatively simple, if it had been planned at an early stage. By means of a double embankment we should have avoided the sharp gradients up from the Embankment to such bridges as now served them. We should also have avoided the inartistic switchback embankments that we found at Lambeth and Blackfriars.

What a wonderful dual road system could have been evolved for the south side of London's river. The lower system would serve for the heavier commercial traffic and communicate with the buildings of the warehouse class. It would also serve for the delivery of goods and the collection of refuse. The lower roads would relieve the upper roads in the pivotal area between London Bridge and Westminster or even Lambeth of the greater part of the obstructive traffic. There would be ramped communication between the upper and lower systems at conveniently planned points, both within and on the limits of the area. The upper roads would be available for passenger traffic, both foot and vehicular. These upper roads would correspond to the level of the principal floors of commercial and other premises fronting on them.

Of course, some people criticised streets in tunnels. But everything depended upon the employment of qualified men to design them. That such streets could be quite unobjectionable when adequately designed and lighted, could be seen in the Quirinal Tunnel at Rome, where a main road passed through the hill on which the Royal Palace stands. The formation of that street in a tunnel was what might well be described as a drastic improvement well carried out. Moreover, it removed an age-old hiatus in that city's communications. As regards the upper roads, the buildings would gain in effective height without exceeding the present limits, and traffic density would be halved. Cost would be largely met by appreciation of site values consequent on advantageous redevelopment.

SOUTH WALES INSTITUTE OF ARCHITECTS.

Hospital Planning.

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch) a lecture was given on Thursday, April 3, at the Engineers' Institute, Cardiff, by Mr. C. Ernest Elcock, F.R.I.B.A., who took as his subject "Some Points About Modern Hospital Planning." Councillor E. W. King, F.I.O.B., presided over an appreciative audience of medical men, builders and architects.

The lecturer gave an interesting and helpful account of recent developments in the planning and construction of a large variety of remedial institutions, including mental hospitals, buildings for the treatment of medical and surgical cases, cottage hospitals and the like. Many of these schemes were on a very large scale, and, particularly in the case of extensive out-patient departments, extremely elaborate in plan. The lecturer showed how recent developments in medical science had given the architect many new problems to solve, and he indicated directions in which the older type of hospital ward could be modified with advantage. It was interesting to note, he said, that as a result of treating the forms which were arising out of the new requirements in a simple rational manner, many of our new hospitals were reaching a higher standard aesthetically than did the earlier buildings of this class. The lecturer emphasised the needs of the patient, but also dealt in turn with the special needs of the medical staff, the nursing staff, the kitchen staff and the visitors. He also dealt in some detail with the question of materials, colours and the special acoustical requirements of medical establishments.

In a discussion which followed a number of points were raised by Dr. Colston Williams and Mr. Percy Thomas, F.R.I.B.A. A vote of thanks to the lecturer was proposed by Mr. Emil Gough, President of the South Wales Branch of the Association of Building Trade Employers, seconded by Mr. W. S. Purchon, M.A., F.R.I.B.A., and carried with acclamation.

CENTRAL SCHOOL OF ARTS AND CRAFTS.

Modern London's Contribution.

Sir Banister Fletcher, P.R.I.B.A., in his final lecture of this session's course on "Ancient Architecture," for the University of London, at the Central School of Arts and Crafts, followed the current of Byzantine architecture as it travelled from Constantinople in the east to the prosperous city of Venice farther west, and to other art centres in Western Europe, where, he said, it has survived sporadically down to the present day. Venice, at the head of the Adriatic, was beautified by the devotion of her sons, who were not satisfied with a distant cathedral at Torcello. So, like the Romans, they built their place of worship close to the ordinary place of congregation, the Great Piazza of St. Mark's. Here arose the great Byzantine cathedral, like Venice herself, proud, dominating and magnificent, in a blaze of colour, with its five gilded domes gleaming in the sunshine against the azure sky. Within, glittering mosaics told the tale of the creation in the dim mysterious light that filtered through small eastern windows. Here carving and moulding give way before the all-pervading colour scheme which sheathed vaults and domes alike, producing a marvellous effect of one harmonious whole.

The lecturer referred to the chief monuments of Byzantine art in other lands—Greece, France, and even England—concluding by giving glimpses of the great Byzantine cathedral of Westminster, impressive by reason of its vast internal proportions, and one day to be sheathed with mosaics in the Venetian manner, which would enable us to realise the generous contribution made by Italy's sun and skies to schemes of decoration. Meanwhile, in north-west Europe, architecture of line and form remained of more value than architecture of colour and was, perhaps, in better accord with the cold greys of our English climate. Concluding, the lecturer expressed a hope that all would look back with pleasure to the studies of ancient architecture made during the course, which would probably be followed in the winter of this year by a course on the mediæval architecture of western Europe.

Builders' Social Dance.

The social club of Messrs. Bovis (1928), Ltd., held its last dance of the season on Wednesday, April 2, at the Portman Rooms, Baker-street, W., when about 300 people were present, including Mr. S. G. Joseph, J.P., managing director of the firm, and Mrs. Joseph (Mayor and Mayoress of St. Marylebone), Messrs. Vincent Gluckstein, A. H. Yeoman, C. A. Munn, and E. G. Chapman. Fancy dress prizes were presented to the winners, and an enjoyable evening was spent.

ROOFS AND ROADS

Sir,—If the Government's Slum Clearance Bill, of which the second reading is to be taken next week, becomes law, architects will have scope and opportunity which may not recur for a century or more. As the underlying object of the measure is the people's health, no less than comfort, I sought and obtained an interview with Sir W. Arbuthnot Lane, the famous surgeon and president of the New Health Society. What he said was so interesting and informing that I have recorded it at some length. Here is something of what he said :—

"I have lately been house and flat-hunting, and one of the most astonishing cases of building ineptitude which I have ever encountered was in the north-west postal district of London. I inspected a large block of flats, for each of which a rental of some £400 a year was being asked, and found that all the vacant flats were those facing the road. No wonder they were empty, pleasant though all the rooms were and convenient as the site of the building was; the noise from the street was terrific. With the ground space available, it would have paid the owners of the property to have stood the building back from the road instead of having lawns at the back. I do not believe those front flats will ever be let at economic rents. The thing to do would be for tenants whose flats abut on the high-road to foot the bill for paving the road with india-rubber. If the owners of the buildings did that, they would enhance the value of their flats—and the empty ones might get let.

"I wonder to what extent is the interest of slum-dwellers aroused at the possibility of their 'native heath' being demolished? I have found the average Londoner living in a poor district to be singularly uninterested in subjects of health. I have lectured in London slums and had thin audiences. I have lectured in the provinces—Glasgow, Leeds, and elsewhere. At Oldham I spoke on health in a hall constructed to seat 1,500. The audience in the hall numbered 3,000, the lecture was relayed by wireless to an overflow meeting in another hall, and it was the same in mining centres.

"I am just back from Margate, and am disappointed to find that this sun-bathed centre caters to-day more for the tripper than for the invalid. But the house in which I stayed has an amenity which I strongly recommend to the architectural profession, who, if the Slum Clearance Bill goes through, will have a chance of working double tides. In the building where I stayed, the ground-floor windows facing south opened into a conservatory of ultra-violet ray glass, and one could sun-bathe from dawn to sunset. It had a front, ends, and sloping roof of the same glass. A real sun-trap, and one easily ventilated by windows always and easily warmed on a dull day.

"If a man is buying a house, the cost of a violet-ray instrument for his bathroom is an insignificant addition to the cost. I have one at home, and two or three minutes' basking in the rays after my bath has the effect of three or four hours' sunshine. Sunshine is the supreme healer. Sun is the basis of all religion. We are all sun-worshippers at heart, whatever our ostensible creed.

"Architects, if they get the great chance which seems likely, ought to give attention to the position of water-closets, which are generally far too near the living accommodation. Their ventilation is generally neglected in flats and small houses. I am strongly in favour of flat roofs. The reason is obvious. They serve as a playground, and do not shut off the sunlight in the early morning hours and the evening hours, as sloping roofs are bound to do. The ancients realised the value of flat roofs, and we in England certainly cannot afford to waste sunshine with sloping roofs."

G. B. J. Athow, Secretary.
Incorporated Association of Architects and Surveyors.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

Road Charges.

REPLY TO "FRONTAGER," APRIL 4.

SIR,—Some local authorities have been badly "bitten" by admitting a varying scale of apportionment for side frontages, and there seems a tendency to assess all frontages on a fixed scale, under which there can be no dispute. HOUSEHOLDER.

SIR,—"Frontager" does not say whether the Private Street Works Act, 1892, is in force in the district or not. If it is, section 10 says apportionment must be according to the frontage, and that in settling the apportionment the local authority may regard (*a*) "The greater or less degree of benefit to be derived by any premises from such works"; (*b*) the amount and value of any work already done by the owners or occupiers of any such premises." It is further provided that premises may be made liable to contribute though not abutting on the street.

Objections to proposed works are set out in Section 7. For instance, that a street or part of a street is not or does not form part of a street within the meaning of the Act; that the proposed works are unreasonable and the estimated expenses excessive; that certain premises ought to be excluded from or inserted in the provisional apportionment, or again that the provisional apportionment is incorrect in respect of some matter of fact, or (where the provisional apportionment is made with regard to other considerations than frontage) in respect to the degree of benefit to be derived by any persons, or the amount or value of any work already done by the owner or occupier of the premises. This last will clearly indicate to "Frontager" that he may have grounds for appeal in his case.

SURVEYOR.

Responsibility for Repairs.

REPLY TO "EPHESUS," APRIL 4.

SIR,—If "Ephesus" looks at the plan accompanying the inquiry, he must agree that either A or B must have the posts and rails; and that therefore one owner can only have the boarded side, which gives "the better appearance." Of course, ownership is proved by the plans accompanying the deeds, and that is the evidence referred to in the original reply. But what "Ephesus" does not appreciate is that that particular evidence is very often not available, and in those circumstances the reply as originally given stands. EVIDENCE.

SIR,—I may remark upon "Ephesus's" comment, that the reason why fences are generally erected with the posts and rails on the owner's side, is that struts are more easily fixed on this than on the boarded side, and the owner is only permitted to fix these projections on his own property. I agree with him that such matters should be clearly defined on the deeds, but such is not always the case. CUSTOM.

Head of Water.

REPLY TO "ARCHITECT," APRIL 4.

SIR,—A reference to any text-book on elementary hydraulics should have sufficed to show your querist that the clerk of works is correct in his assertion. The point at issue is easy to grasp. Perhaps the following will help "Architect" to understand the matter. Imagine a large rectangular tank filled with water, then place in it a pipe 10 in. diameter, with its ends fitted with two disc valves, fitting the pipe watertight. In the centre of the pipe's length on the top, drill and tap a hole to take a piece of ½ in. diameter pipe. Now make this experiment. With the end valves open, lower the 10 in. pipe to the bottom of the tank. It will obviously instantly fill with water. Now close the two ends by the valves, and the water pressure in the pipe will not be disturbed. Next lower a piece of ½ in. pipe, open at both ends, into the tank, and screw one end into the 10 in. pipe. This pipe must be long enough for its upper end to be up above the level of the water in the tank. Again, it is obvious that no change of the pressure conditions in the 10 in. pipe can have occurred. Now run all the water out of the tank, leaving the pipe system filled, as before, but the pressure conditions obtaining inside obviously cannot have been altered in any way; therefore the pressure within the 10 in. pipe everywhere must be proportional to the difference of level between the free surface in the pipe and the point in the pipe under consideration. If "Architect" now places a piston in the end of the ½ in. pipe, and loads it, he will then increase the pressure in the 10 in. pipe proportionately, in fact his system of pipes has become an hydraulic press. P. Q. X.

SIR,—The clerk of works is right, as the pressure of head of water has no relation to the bore of pipe, except in the case where, in a very small bore, the frictional resistance of the pipe becomes a matter of disproportionate value. HYDRAULICS.

Smoke Flues in Skyscrapers.

SIR,—Published plans of American multi-storied hotels do not show any arrangement for smoke flues, although, I understand, coal is burnt in the kitchen ranges and elsewhere in the buildings, and some publications refer to "smoke towers" in these skyscraper buildings, but these towers do not show on the plans. Would some reader of *The Builder* kindly enlighten A SOUTH AFRICAN.

Professional Etiquette.

REPLY TO "ANXIOUS ENQUIRER," APRIL 4.

SIR,—Your correspondent comments very kindly on my reply to his original inquiry. I still think he must clear his mind of confusion. Does not he see that if breaches of etiquette on the part of others are allowed to excuse a fresh one, there is an end to all the decency of professional intercourse? Someone has got to stand firm. It is also a confused view to take that, whereas small commissions of a similar nature have been treated with courtesy, this cannot be because it is a job worth keeping. This is really a greater moral reason for acting rightly. Otherwise our virtue has a price. Your correspondent may take heart from the fact that correct action under such circumstances adds to the standing of an architect, and in the long run even material loss is counter-balanced. PRACTICE.

Penalty Clause.

REPLY TO "INQUIRER," APRIL 4.

SIR,—Your correspondent has answered his own question. If the weather has been "unprecedented" it cannot represent the "normal uncertainty of the English climate," and is therefore an occasion for a relaxation of the penalty clause. ASSESSOR.

Seasoned Timber.

REPLY TO "DOUBTFUL," APRIL 4.

SIR,—Much depends on the material. If it is oak, it is impossible to avoid shakes with scantlings of that bulk, unless a large bore hole is drilled down the centre of the member, which sometimes saves the situation. With the softer woods, shakes of small extent may be stopped and filled in, but a serious crack running down and possibly destroying the strength of a tenon, should be condemned. The job wants seeing. PRACTICE.

Breeze Partitions.

REPLY TO W. AND J., APRIL 4.

SIR,—If your correspondent follows the model by-laws for lengths and heights of walls in the following relations, he will not be far wrong; for 3 in. breeze, as for 4½ in. brick; for 4 in. breeze, midway between 4½ in. and 9 in. brick. BLOCKS.

Coke Breeze Bricks.

SIR,—I should be glad if any of your readers could give me the correct proportions for the making of coke breeze fixing bricks, so as to get the exact texture for driving in the plugs. R. M. P.

White Marble.

SIR,—I should be obliged if any of your correspondents could tell me if there is any sort of oil or other material or preparation (if so, what and how it is made, and where can it be obtained) to preserve white marble from decay from weather when in the open. Also, what is the best way to prevent stains to marble when in the open and to get rid of stains when they are there? W.

BUILDING PRACTICE

By W. T. CRESWELL, Barrister-at-Law.

XIII.—PERMISSION TO ERECT TEMPORARY BUILDINGS.

WE have previously pointed out that, although, strictly speaking, plans for new buildings are submitted to the local authority for approval, the permission of this authority is not required before erecting the buildings; but unless they are in accordance with the by-laws and the statutes in force in the district, the local authority has power to interfere and take whatever measures will insure compliance.

Permission of the local authority is, however, required before a *temporary* building can be erected. Moreover, before erecting a temporary building there are (in addition to the requirements to comply with by-laws applying to temporary buildings made under the powers given to local authorities in the Public Health Act, 1875) other requirements under the Public Health Acts Amendment Act, 1907, in those districts where this statute has been made operative under an Order of the Ministry of Health.

Under Section 27 of the last-named Act, a local authority is empowered in the case of a temporary building as where a proposed new building is only *partly* temporary to require that a plan of the proposed temporary building, or portion, be submitted to them; and their consent is then a precedent of its erection. Further, the local authority may attach to their permission any conditions which they deem proper so as to ensure the healthiness of the building, means of ingress and egress thereto, and means of prevention of risk from fire. The local authority may also determine the period during which the temporary building shall be allowed to stand.

Failure of the local authority definitely to *disapprove* those plans when submitted may act so as to debar that authority from raising any question after the temporary building is erected. The Act does not contemplate any form of agreement between building owners and the local authority giving permission for the erection of temporary buildings, nor any fee chargeable for that permission when applied for or given.

Refusal of Permission.

Should the local authority refuse permission to erect any temporary building or imposes such conditions as would appear to be unreasonable, the person proposing to erect cannot force the issue by proceeding to erect it. Non-compliance with the conditions referred to above enables the local authority to remove the building at any stage where it contravenes their conditions after *first* giving notice to the defaulter and affording him an opportunity to state his reason for non-compliance and before the building is demolished.

Against any decision of the local authority, the applicant's remedy is by appeal, under Section 7 of the Act, to Quarter Sessions. There is no right of appeal to the Minister of Health. The right of appeal to Quarter Sessions would also be applicable where an authority refuses to renew its permission for a temporary building, when the term or terms previously granted have run out.

THE WEEK IN PARLIAMENT

WESTMINSTER, Wednesday.

Unemployment.

Miss Bondfield, Minister of Labour, gave figures of unemployment at the request of Sir Kingsley Wood. She stated that, at February 24 this year, the number of insured persons, aged 16 to 64, classified as belonging to the building industry recorded as unemployed in Great Britain was 147,306, as compared with 199,330 at February 25, 1929.

The Warrington Housing Scheme.

Mr. Ramsbotham asked the Minister of Health, whether his attention had been called to the fact that 1,000 houses have been built at Warrington, the economic rent of which, including a sum for purchase by instalments, works out at 8s. 4d. per week; whether he could state the circumstances and special financial arrangements which enabled these houses to be so cheaply constructed; and whether he proposed to draw the attention of other local authorities to the success of the experiment?

Mr. Greenwood replied that he had not any recent report upon these houses. So far as he was aware, they were not built under any special financial arrangement. The Corporation paid, as other Corporations had done, a subsidy of £100 a house, and made advances on mortgage to the builders or purchasers of the houses. He understood that the purchasers did not acquire the freehold of the houses, but remained under a liability to pay ground rent. Under arrangements made by his predecessor subsidy was no longer available towards the cost of houses which were built for sale.

Southwark Housing.

Mr. Day asked the Minister of Health whether the Southwark Borough Council had built any houses under the Housing Acts of 1919, 1923 and 1924; whether he was aware of the hardship created by the number of families living in overcrowded conditions in this borough; and whether any new schemes for the relief of this congestion was under consideration?

Mr. Greenwood said the answer to the first part of the question was in the negative. There were no vacant sites in the borough for the relief of the overcrowded conditions which existed in the borough; it was necessary to rely primarily on the provisions undertaken by the London County Council. That authority was carrying out a large programme of building which included a number of schemes for providing housing accommodation in the inner parts of London. The County Council had also undertaken schemes for dealing with unhealthy areas in the borough.

The New Housing Bill.

The text of the Housing and Slum Clearance Bill, which the Minister of Health is to introduce on second reading in the House of Commons at an early date, has now been issued. The first part of the Bill deals with clearance areas and improvement areas, and the second part with individual insanitary houses. The definition of a clearance area is substantially the same as that of an unhealthy area under the present law.

The area can be cleared in two ways, by requiring the owners to demolish the buildings or by the local authority purchasing the area and then arranging for the demolition. The first method is new and is intended to enable the local authority to secure the removal of a bad slum without being obliged to incur the heavy capital expense of purchase and clearance. The second method of dealing with a clearance area will be by purchase by the local authority which would itself undertake the removal of buildings on the site. The procedure is intended to be simpler and more expeditious than that at present in operation, and does away with the necessity for a formal scheme. The local authority, having bought the land by agreement or by compulsion, must proceed to demolish the buildings and either appropriate the land for some purpose for which they have statutory powers, or dispose of it in some other way. In some cases they may have to rehouse on the site or they may keep it as an open space.

Clauses 5 and 6 of the Bill deal with improvement areas—those districts where the general conditions are not so bad as to justify wholesale clearance, and where a great improvement can be obtained if the worst houses are removed, necessary repairs carried out, surplus population taken from the area, and steps taken to ensure that once the area has been dealt with it is not allowed to relapse. An essential part of any action taken by local authorities in regard to either clearance or improvement areas must be the provision of new houses, and the Bill requires that before taking any steps involving the displacement of population the local authority must undertake to provide new dwellings to the satisfaction of the Minister. Clause 5 enables local authorities to define improvement areas, and Clause 6 sets out the action which must be taken when an area has been defined to compel the demolition of houses which are beyond repair and to put other houses into a satisfactory condition. It is not proposed to change the present law of compensation for property in a clearance area.

In Part 2 of the Bill there is an alteration of the existing law with regard to the repair and demolition of individual insanitary houses. It is intended to simplify the procedure and provides that the appeal tribunal shall be the County Court instead of the Minister. Houses which are considered unfit for human habitation may be divided into those which can be made fit at a reasonable cost, and those which cannot. In the case of houses in the first category, local authorities may require the owner to carry out the necessary work, or, if the owners default, may do it themselves and recover the cost. In suitable cases money may be lent to owners undertaking repairs. If the house cannot be made fit at a reasonable cost, then the local authority may enforce an order for its demolition. The financial provisions are in some respects the most important part of the Bill. The present 50 per cent. grant is to be abolished and replaced by an annual grant on a unit basis, which the associations representing the local authorities are prepared to accept. The new grant is to help towards the expenses incurred by local authorities in rehousing persons displaced from clearance areas, improvement areas, and individual insanitary houses outside those areas which are demolished by order of the local authority. The grant will be based on the number of persons required to be displaced for whom accommodation in new houses provided by the local authority is made available, and will be payable annually for 40 years. The normal grant will be 45s. a year per person required to be displaced from houses in agricultural parishes.

Where it is necessary to rehouse on expensive sites in tenement buildings of more than three stories, or where the approved cost of the site exceeds £4,000 an acre, the grant will be increased to 70s. per person. This is intended to meet the special cases where people must be rehoused as near as possible to their work. Certain special conditions must be observed in regard to houses made available for displaced persons. Rents must be fixed by the local authority after taking into account a charge on the rates of not less than the equivalent of £3 15s. a year for 40 years, the normal charge borne by the rates for houses provided under the Wheatley Act. The Government claim that the increased assistance proposed will enable the authorities to provide a proportion of houses at "Wheatley" rents and others at a definitely lower rental. Assistance is to be granted through local authorities to societies and companies engaged in housing, who limit the amount of their dividends, or who do not trade for profit, and who are willing to help in the work of rehousing persons displaced from slum areas. There is a proposal in Clause 39 to build houses for aged persons of a smaller size than the minimum in respect of which Exchequer assistance can now be given. The present Exchequer contribution is £7 10s. a year for 40 years. In respect of the new smaller houses it will be £5 a year for 40 years, equivalent to a capital value of £86.

A further attempt is to be made to deal with rural housing, and it is proposed to put a new responsibility upon the county councils by enabling them to undertake building on behalf of a rural district; by empowering them to contribute to the expenses of ordinary rural housing, and by putting an obligation on them to contribute to houses provided by rural councils for agricultural workers or persons of a similar economic condition.

In the discussion on the Bill, Mr. Chamberlain said that the most important provision in the Bill was the alteration of the subsidy, and he approved the method of getting away from the percentage contribution. Experience of the Housing Acts of 1923 and 1924 showed that the plan of making definite contributions from the Exchequer conduced to efficiency and economy. So far as the increase of subsidy was calculated to reduce the liabilities of the local authorities he approved of it. In so far as the new subsidy was to make differential rents, he foresaw considerable difficulties. He regretted also that there was no provision for the town-planning of built-up areas, which had been long called for and was understood to be associated with a Bill of that kind.

There was also (Mr. Chamberlain pointed out) the exceptionally harsh and unjust provision dealing with compensation to owners whose property was to be demolished. His first criticism of the clause dealing with clearance areas was that, where the local authority adopted either alternative—the alternative that the owners must demolish buildings or that the local authority should purchase and demolish the buildings themselves—no distinction was to be made, apparently, between any of the buildings which were to be condemned, and no distinction was made between those and the houses which were unfit for human habitation. In many cases, owners had been compelled to spend money in putting houses in good condition; but, once an area had been declared a clearance area, those houses would have to be pulled down by the owner at his own expense. He did not think that that proposal, if he understood it rightly, could be allowed to stand in the Bill. In the case of local authorities purchasing an area, there again all houses in the area were to be purchased by the local authority at site value. In the existing procedure, a distinction was made between two kinds of property. That distinction was now to be swept away, and every house was to be taken at site value.

The Minister of Health had missed, Mr. Chamberlain declared, a great opportunity with respect to the treatment of improvement areas. In dealing with housing accommodation of the kind involved in improvement areas the management of the property was of enormous importance. One of the difficulties of those areas was the great multiplicity of ownership. Where there was a large number of individual owners, each one owning one, two, or more houses, there could not be a proper standard of management. The Minister had said that reconditioning could never be a complete policy; he had never heard it suggested that it could be a complete policy. Reconditioning might be a very valuable adjunct to other provisions dealing with housing.

The Bill received a second reading without any division, but it will be certainly subjected to considerable criticism in Committee, and efforts will be made to amend it, especially in regard to its compensation proposals.

THE BUILDING TRADE

USE AND ABUSE OF BUILDING MATERIALS

By A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.

XV.—LIMES.

MORTAR.—Mortar is composed of a mixture of lime and sand, and it is here we find undoubtedly the most important use to which lime has been put, though we must not forget that wall-plastering is almost equally important and demands a very large proportion of the lime supplies. There are many reasons why sand is added to the lime in the preparation of mortar. In the first place, though lime, when being slaked, increases very much in volume, it also, upon drying, decreases or shrinks to a large extent, and therefore one reason for adding sand is to prevent excessive shrinkage. Again, since sand is much cheaper than lime, we get bulk in the mixture of lime and sand at much less expense than we should for pure lime. Also it is known that there is no definite chemical action between the lime and sand but that it is purely a mixture in which the sand really helps to make the mortar more porous, may we say. It is thought that by this means the carbon dioxide of the atmosphere can penetrate to the interior of the mortar, thus getting at the hydrated or slaked lime and combining with it.

It should be suggested, however, that the one really important reason for adding sand to lime is to gain strength of material, for it is known that up to a certain point the strength of mortar increases with the amount of sand added. Many "mixes" of differing proportions have been tested, and it has been shown by Sabin that a mortar of 1 part of lime to 6 of sand is stronger than 1 of lime to 3 of sand. Authorities, however, do not quite agree upon the actual increases of strength, though it has been shown in many cases that there is an undoubted increase when sand is added to lime.

The percentage of water also seems to have a marked effect upon the strength of mortar mixtures. For example, the tensile strength of lime mortar may increase from 66 to 76 lb. per sq. in. when the amount of sand is doubled, as in comparing a 1 to 1 with a 1 to 2 mixture of lime and sand, but the strength diminishes to 55 lb. per sq. in. if the mix is in the proportion of 1 to 3. If now with the same mixes double the quantity of water is used, the general strength is slightly less, but the 1 to 3 is stronger in proportion, while if the amount of water be trebled there is a slight decrease in the 1 to 2 as compared with the 1 to 1 proportion, but curiously the 1 to 3 mix gives the greatest strength.

It seems that to get the best mix as far as the strength of lime mortar is concerned, very much depends upon the ratio of the sand to the lime as well as upon the amount of water that should be used, and that some time must elapse and much more experimental work be done before definite and reliable figures can be given, while really, at present, figures should only be taken for actual materials and actual experiments. An interesting point arises here since some people, who have done considerable experimental work upon the strength of lime mortars, say that the greatest strength has not been reached until complete carbonation, i.e., the combination of carbon dioxide with the lime, has taken place. There seems, however, to be some difference of opinion about this point because it has been proved that the strength of lime mortars is greater at the end of nine months than at the end of a year, when it is known that carbonation is not even then quite complete. Though this is the case there seems to be no explanation for it.

Another point that seems to have an important bearing upon the strength of mortars, particularly in the case of compression, is that of the size of the sand particles. In nearly all cases it has been found that the finer the sand particles the greater the compressive strength, *e.g.*, the compressive strength of a mortar made of a fat lime, or at any rate, one with a high percentage of oxide of lime (CaO), and a sand whose particles would pass a "60" to "80" mesh sieve was approximately 260 lb. to the sq. in., while the same lime with larger sand particles, say those that would pass a "10" to "20" mesh sieve, gave a compressive strength of about 100 lb. per sq. in. It has been suggested that perhaps the better and quicker carbonation of the lime mortar makes up for the increased strength obtained by the use of the finer sands.

SAND.—For making really good mortar the sand should be clean, sharp, and gritty. Though the proportions of sand to lime may vary considerably it is said that, for constructional purposes anyway, the best results are obtainable by a proportion of 2½ parts of sand to 1 of pure slaked lime, or 1¾ parts to 1 of hydraulic lime. Since nowadays so much is known of the mechanical properties of a mixture of sand and lime it would seem that it is not always advisable to accept blindly the reports or figures for any particular sample of sand. It is as well to satisfy oneself by personal examination and tests since it is common knowledge that even from the same sand-pit the characteristics and properties may vary considerably. For example, in sampling a supply or source of sand it should not be forgotten that the coarser particles will always tend to sift to the bottom and that, when taking a sufficient quantity for test, some should be taken from all parts of the deposit. There is a method of selection, known as the "method of quartering," which would seem to be very satisfactory in this connection.

Again, as stated above, the sand should be clean, *i.e.*, free from loam or earthy matter. It is agreed that, before being used, loamy or dirty sand should always be washed. The reason seems perfectly obvious since there is no cementing or setting property in earthy matter, and its presence only interferes with intimacy of contact between the sand and the lime or cement particles. Washing the sand is a very simple matter, for it is only necessary to place it in a vessel and allow a stream of water to flow into and out of it, at the same time agitating the sand thoroughly so that the earthy matter may be carried off in suspension in the water.

Further, it is not at all a difficult matter for anyone to test the cleanliness of a sample of sand. Place a small quantity in a glass vessel, preferably a cylindrical one, shake it up well with sufficient water to cover it, and then allow it to stand for an hour or so. If the sand be at all dirty a layer of earthy matter will be clearly seen on the top of the sand.

Again, it is said that sand should be gritty and have a rough surface; therefore, river or sea sand is not so suitable since the grains will be round and smooth; besides in the case of sea sand there will always be present a certain amount of sea salts, and these, in addition to causing efflorescence on brickwork, will also cause the walls to appear and be actually damp if used in the making of plaster.

Good pit sand is considered to be the best for all building purposes. While for bricklayers' work it may be moderately coarse, certainly for plastering it should be fine, as it makes the trowelling so much smoother as well as helping to decrease the percentage of voids in the plaster. Again, although sand for plasterers' work should always be washed, it is not an infrequent occurrence for this to be omitted in the preparation of the plaster for the first coat, though it is generally done for the final and setting coats.

VOIDS AND UNGRADED SAND.—If a small quantity of dry sand be placed in a glass vessel it can easily be seen that between the particles of sand there are spaces. These interparticle spaces are called voids, and, though perhaps the consideration of these is of more importance when concrete is being discussed, it is nevertheless of some interest to know something about them in connection with mortar. The percentage of voids in any loose aggregate like sand is quite easily determined. Knowing the volume of sand as measured in the vessel, add a known quantity of water, sufficient to come above the top of the sand. By subtracting the volume of water above the sand from the amount of water added we obtain the amount of water that is filling the voids in the sand. The calculation of the percentage voids in the sand follows quite easily. For example, suppose we place 50 cu. in. of sand in the vessel, then add 15 cu. in. of water and find that 4 cu. in. are above the sand, then, evidently 11 cu. in. of water are occupying the spaces between the particles of sand.

Then in 50 cu. in. of sand there will be 11 cu. in. of voids and consequently in 100 cu. in. there will be 22 cu. in. of voids, or the percentage voids in the sample of tested sand will be 22. Now it is well known that if one mixes together particles of different sizes the combined volume will be less than the sum of the separate volumes, *i.e.*, by mixing them one gets a diminution in volume. This really means that the smaller particles slip in among the larger particles and help to fill up the voids between them, while if smaller particles still be mixed with the others, the more the voids will be occupied by material.

An ungraded sand is one in which all the particles are of the same size, that is to say, they will all pass through a sieve with a "30" mesh. By the way, a "30" sieve means that in each linear inch of mesh there are 30 spaces, so that in a square inch there will be 900 holes. The different grades of a graded sand, such as Leighton Buzzard sand, for example, can be separated by placing a sample of sand upon the top of a nest of sieves having different mesh sizes, and then shaking them by a circular motion, when the different grades will be left upon the separate sieves. It follows then also that the percentage of each grade can be quite easily determined.

In making mortar, therefore, it should now be quite evident that it is advisable to use a properly graded sand which, when mixed with the infinitely smaller particles of lime, tends to make a denser and closer mixture. It has also been suggested that the water acts almost like a lubricant, since it helps the particles to move more easily among themselves and fill up the voids.

There appear to be several necessary considerations in the proper mixing of the mortar ingredients. For example, it is important that the time should not be too prolonged, and, of course, that there should be as little waste of materials as possible. In spite of these precautions it is, of course, understood that the really important point is that one should get a good mixture of moderately uniform consistency. Now whether the mixing be done by hand or by machine, it is agreed that the materials should first of all be dry-mixed for a short time so as to ensure that the sand particles become properly coated with the lime paste. This process, viz., dry-mixing first, also seems to allow the sand and lime particles to get more evenly and intimately distributed. It has been suggested that

the time of mixing might be reduced if a dry sand were used. This is, however, a rather dangerous policy since it is more than likely that the sand might absorb moisture from the lime paste, and so, in some way, affect the hardening properties of the mortar.

Proper consistency of the mix is another important point, and to a large extent it may be said to depend upon the nature of the work in hand. Though this is the case, it is important not to use a greater percentage of water than is really required, since by so doing one will undoubtedly decrease both the strength and the density of the mortar.

LANDLORD AND TENANT ACT, 1927

CLAIM BY RECEIVERS ON BEHALF OF DEBENTURE HOLDERS.

Some important points under the Landlord and Tenant Act, 1927, were decided by a Divisional Court constituted of two Lords Justices of Appeal in the recent case Gough's Garages, Ltd., and Another *v.* Pugsley (*Weekly Notes*, March 29, 1930). By a lease dated March 31, 1923, certain premises were leased by J. Pugsley to G. A. Gough for a term of seven years expiring June 24, 1930, at a rent of £200 per annum. On November 2, 1925, the premises were assigned by Gough to Gough's Garages, Ltd., and in December of that year the company issued a debenture by which it charged its undertaking and all its property present and future including its uncalled capital to secure the money due to the debenture holders. The debenture was stated to be a first charge, and as regards the company's land at Bristol and all other freehold, leasehold, and copyhold property for the time being of the company a specific charge, and as regards all other property and assets of the company a floating charge, and it was also provided that at any time after the principal moneys became due the debenture holders might appoint a receiver, and that the receiver so appointed should have power to take possession of, collect, and get in the property charged, and for this purpose take any proceedings in the name of the company or otherwise.

On April 22, 1929, the company's then solicitors had given a notice under section 5 of the Landlord and Tenant Act, 1927, to the executors of Pugsley requiring the grant of a new lease in the following form, headed with a description of the property leased to the Company: "As solicitors and agents for and on behalf of Messrs. Gough's Garages, Ltd., whose registered office is situate at ..... we hereby give you notice that in pursuance of section 5 of the Landlord and Tenant Act, 1927, the said Gough's Garages require you to grant them a new lease of the above premises for a term of 14 years to commence from June 25, 1930, on the grounds specified in the above-mentioned section of the Act." Receipt of this notice was duly acknowledged by the solicitors of the executors, but the notice had not been complied with.

In July, 1929, the debenture holders appointed a receiver of the property comprised in the deed, and on September 23 the receiver had commenced proceedings in the county court to obtain the grant of a new lease. On September 27, 1929, a petition was presented in the High Court to wind up the company, and on October 15 a compulsory order was made and a liquidator appointed.

At the hearing in the county court, two preliminary objections had been taken to the action on behalf of the executors, both of which had been upheld by the Judge: (1) That an order having been made to wind up the company, the receiver could not continue the action, and (2) That the notice was not in the form prescribed by Order L b, rule 2, of the County Court Rules. The Divisional Court overruled both objections, holding (1) that the right to apply for the renewal of the lease under section 5 of the Landlord and Tenant Act was a right given by the company to the debenture holders as part of their security, and the receiver was entitled to enforce that right, notwithstanding the liquidation of the company, and (2) that as section 5 of the Act did not require that the notice of claim for a new lease should be in any prescribed form, the Rule in question was *ultra vires*, and the case was remitted to the county court for hearing.

It is this latter decision that raises a curious point under the Act. Under section 1 a claim for compensation for improvements has to be made "in the prescribed manner," as has also a claim for compensation for goodwill under section 4, and by section 25 the expression "prescribed" means "prescribed by County Court Rules." Under section 5, although the tenant claiming a new lease apparently has to show (the word in the Act is "alleges") that he would be entitled to make a claim for goodwill, but the compensation payable in respect of that under section 4 would not compensate him if he removes to and carries on trade in other premises, the section proceeds: "he may in lieu of claiming such compensation" (for goodwill) "at any time within the period allowed for making a claim under section 4 serve on the landlord notice requiring a new lease of the premises. . . ."

It is to be observed that the word "prescribed" does not in section 5 occur in relation to the procedure as is the case in sections 1 and 4, and this we imagine to be the basis of the present decision. Order L b, Rule 2, prescribes the form of notice for claims for improvements, goodwill, and for a new lease, and requires (a) a description of the holding and of the trade or business there carried on, (b) a concise statement of the nature of the claim, (c) if the claim is in respect of an improvement, particulars of the improvement including the date whereon the improvement was completed and the cost thereof, and (d) if compensation is claimed, a statement of the amount claimed. From the nature of these required particulars it would appear that they are suitable to a claim for improvements or goodwill, but that the latter two at any rate do not apply to a claim for a new lease, and it would seem, in the light of the present decision, that a claim for a new lease was inserted by an oversight of the Rule Committee.

LAW REPORT

COURT OF APPEAL. Before LORDS JUSTICES SCRUTTON, GREEN, and SLESSER.

HOUSING SCHEMES—EFFECT OF MINISTER'S ORDER.

Rex v. Minister of Health ex parte Yaffe.

In this case Mr. Abraham Yaffe, an estate agent and property owner, of Liverpool, appealed from the judgment of a King's Bench Divisional Court consisting of the Lord Chief Justice and Justices Swift and Talbot discharging by a majority (Mr. Justice Swift dissenting) the rule *nisi* for *certiorari* granted on March 26, 1929, at the instance of Mr. Yaffe, calling on the Minister of Health and the Liverpool Corporation to show cause why an order of the Minister dated November 23, 1928, confirming an improvement scheme known as the Liverpool (Queen Anne-street) Improvement scheme, 1928, should not be quashed.

It was alleged that the Minister had no jurisdiction to make the order for the following reasons:—That the scheme as submitted to the Minister was not an improvement scheme within Part 2 of the Housing Act, 1925, because it contained no concrete proposals for the development of the land within the Queen-street area after its acquisition by the Liverpool Corporation; also that it did not provide for the rearrangement or reconstruction of any of the streets and houses in the area. It provided that land within the area might be sold leased or otherwise disposed of as the Council might think fit and the estimates which accompanied the scheme were insufficient. It was also said that the local inquiry which the Minister caused to be held in May, 1928, was void because there was then no improvement scheme within the meaning of the Act to be inquired into. It was further alleged that the modified scheme purported to have been confirmed by the Minister was not an improvement scheme within the Act as it did not indicate the manner in which the lands were to be developed and was not accompanied by any layout plan. A clause which purported to incorporate in the scheme plans to be made afterwards by the Council and approved by the Minister it was urged was *ultra vires*.

The important question raised by the case was whether the confirmation of a scheme—good, bad, or indifferent—by the Minister gave it statutory effect and prevented the Court from inquiring into it.

The majority of the Divisional Court held that Section 40 (5) of the Housing Act, 1925, which provided that "the order of the Minister when made shall have effect as if enacted in this Act," gave statutory effect to any order *bona fide* intended to be made under the Act. The Court therefore discharged the rule *nisi* for *certiorari* and from this result Mr. Yaffe now appealed.

Mr. H. A. Hill and Mr. Nicholls (instructed by Messrs. Few & Co., agents for Mr. W. J. Shield, Liverpool) appeared for the appellant. The Attorney-General (Sir Wm. Jowitt, K.C.) and Mr. Bowstead (instructed by the solicitor to the Ministry of Health, for the Minister; and Mr. H. P. Glover (instructed by Messrs. Venn & Co.) for the Town Clerk of Liverpool for the Liverpool Corporation.

Mr. Hill explained that the question in the case was whether orders by the Minister which by statute were to have statutory effect if made after certain conditions had been complied with still had that statutory effect when conditions were not complied with.

Under the Housing Act of 1925 local authorities were authorised to prepare schemes for the clearance of unhealthy areas. When they had prepared schemes these had to be published and they had to be submitted to the Minister who might confirm them. If the Minister proposed to proceed to confirmation he must hold a local inquiry.

Lord Justice Scrutton: "Must" or "may"?

Mr. Hill: "Must." If he is satisfied that the scheme will be of benefit to the inhabitants of the area he may confirm it, but it is only after being satisfied that he can confirm the scheme.

Proceeding, Mr. Hill said that the area in question was between five and six acres in extent. It was declared to be unhealthy in February, 1928, and a scheme was prepared by the Director of Housing for the reconstruction of the area. If that had been the scheme approved no difficulty would have arisen. But the scheme put before the Minister of Health was one in which the Corporation took power to widen streets and use the other parts of the land for such public purposes as they chose and to sell the unused balance. The scheme of the Director of Housing was one for the accommodation of 2,876 persons with new dwellings. This was not a housing scheme within the meaning of the Act at all.

Mr. Hill, having read the evidence relating to the proposed scheme, contended that the scheme was such that a writ of prohibition could clearly have been obtained before confirmation by the Minister.

The Attorney-General for the Minister contended that up to February 16 everything was regular. The difficulty arose because on March 7 the Corporation approved what they thought was a document putting into proper legal form the draft scheme approved by the Housing Committee. He had himself traced the "code" (section 40, subsection (5)) contained in the Act back to the fourteenth century.

Their Lordships reserved judgment.

RENT RESTRICTION

DECONTROL.

Some difficult points in connection with the decontrol of rent-restricted premises appear to have been raised in the recent case, Abbey *v.* Barnstyn (*Weekly Notes*, March 29), before a Divisional Court constituted of two Lords Justices of Appeal. By an agreement for a lease, the premises had been leased by a Mr. Garrett to a Mr. Watson for a term of three years at a rental of £45 from March 25, 1919, the tenancy to continue thereafter, but to be terminable by six months' notice in writing. On March 25, 1922, Garrett gave Watson six months' notice to determine the tenancy but Watson continued in occupation, though so far as can be gathered from the present brief report on different terms, as the rent was £54, that is, the old rent plus the permitted increases under the Rent Acts. On May 7, 1926, Watson died, having by his will appointed his wife his sole executrix and universal legatee. Mrs. Watson never went into physical possession of the premises, but on May 26, 1926, she entered into a new agreement for a three years' tenancy at the same rent, £54, and assigned the tenancy to the defendant in this action. On December 5, 1927, the plaintiff acquired the freehold of the premises, and on January 5, 1928, gave the defendant notice to quit at the expiration of the term. The defendant, in the action for possession, claimed the right to hold over under the Rent Acts, but the plaintiff claimed that the premises became decontrolled by the agreement of May 26, 1926. The whole question appears to have turned upon what was the position of Watson when he continued in occupation after the expiration of the original agreement. If he then continued on as a statutory tenant, he had no power to leave his interest in the premises by will (See Lovibond and Sons *v.* Vincent (1929, 1 K.B. 687), *The Builder*, April 5, 1929); if, however, at the date of his death he was a contractual tenant, then his executrix succeeded as assignee in law to his rights as a tenant, and became subject to the liabilities of a tenant to the extent of the assets in her hands.

The bearing this point has in this case arose in the following manner. The claim to decontrol did not arise under section 2, sub-section (1) of the Rent Act, 1923, which requires the landlord to be in possession, but under sub-section (2) which provides: "Where at any time after the passing of this Act, the landlord of a dwelling-house to which the principal Act applies grants to the tenant a valid lease ending not earlier than one year after the date fixed, at the time at which the lease is granted, for the expiration of the principal Act," (These latter words were inserted in place of a fixed date by section 1, sub-section (3) (b) of the Rent Restrictions Continuation Act, 1925) "being for a term of not less than two years, or enters into a valid agreement with the tenant for a tenancy for such a term, the principal Act shall, as from the commencement of the term cease to apply to the dwelling-house, and nothing in the principal Act shall be taken as preventing or invalidating the payment of any agreed sum as part of the consideration for such lease or agreement." Thus the Court had to decide whether the widow of Mr. Watson succeeded as assignee in law to the rights as tenant of Mr. Watson, he being a contractual tenant, and thus became in her turn a "tenant" within the meaning of the above sub-section, or whether Mr. Watson was merely a statutory tenant.

The Court held that there was evidence which justified the County Court Judge in holding that Watson at the end of his lease became a tenant from year to year by payment and the receipt of the first quarter's rent increased from £45 to £54.

From a report of the case in *The Times*, March 19, it appears that the Court intimated that it was unnecessary to decide whether, in the absence of notice to increase the rent, the extra £9 was recoverable, but they held that the absence of notice did not make the agreement invalid thus making Watson a statutory tenant, for there was nothing in the Acts which prevented the landlord and tenant creating a new contractual tenancy at a rent no greater than the aggregate standard rent plus the permitted increases. Thus, as Watson was held to be a contractual tenant, it was held that the tenancy passed to the executrix under his will and could be assigned, and the fact that she had not entered into physical possession was immaterial. It was, however, further argued that still Mrs. Watson was not "the tenant" under section 2, sub-section (2) of the Act of 1923, because that sub-section only applied to decontrol the premises when the new lease was granted to a statutory tenant, but the Court negatived this contention, holding that the sub-section applied either to a contractual or a statutory tenant.

In Bartrum *v.* Brown (1929, 1 K. B. 103; *The Builder*, January 25, 1929) it was held by the Court of Appeal that the words, "the tenant," in this sub-section mean a person in occupation as tenant of the dwelling-house at the time when the new lease is granted, and the expression, "the sitting tenant," has been sometimes used, but the Court in the present case laid it down that there was no reason for construing the words as denoting only a statutory tenant. If this case serves no other purpose it well illustrates the inconvenience and uncertainty attaching to the continuance of the Rent Acts, a temporary form of legislation which has now nearly attained its sixteenth year.

MASTER SIGNMAKERS' ASSOCIATION

The first annual conference of this Association was held at the Holborn Restaurant on March 28, when about one hundred members were present. Mr. James A. Laidlaw, President of the Association, occupied the chair. Amongst those present were Messrs. Arthur Chadwick, F. G. Sayer, Howard Robertson, J. M. Woolnough, J. H. Pearce, E. W. Pether, H. S. Coleman, E. G. Read, W. H. Seward, P. J. Sheridan, N. Durning, E. Palmer, and John Langdon, general secretary.

Mr. Arthur Chadwick, in declaring the conference open, said he wished the Association had opened its doors to advertisers.

The Chairman pointed out that it was the first conference they had held, and they hoped to invite the advertisers next year.

Mr. F. G. Sayer then read a paper on "Modern Methods of Sign and Glass Writing," in the course of which, touching on the question of lettering, he said the public had come to realise that a simple, well-written sign conveyed its message in less time than those in which the lettering was so ornate as to become almost undecipherable. To meet this change of taste, what did we moderns do? We just went back 1,800 years to Rome of A.D. 113, discovered the beauties of the Trajan lettering, and adapted it to our various requirements. Its beauty of line was just what was wanted, and, although there were many amongst them who were using it before, it was the late Sir Lawrence Weaver who put the seal to its popularity by insisting on its use at the Wembley Exhibition.

Mr. A. C. Corrie having made a few remarks, the Chairman proposed and Mr. F. A. Baker seconded a vote of thanks to the lecturer.

Mr. Howard Robertson then read a paper on "Signs in Relation to Architecture," in the course of which he said it must be remembered that on a commercial building arrangements must be made for advertisements and display. Architects, in considering the design of commercial buildings, did not appear to have ever realised that electricity was necessary. He thought architects were guilty of overlooking electricity as a decorative element. The architect had carefully studied his building by day, but he would do well to make a study of it by night. There was great lack of co-ordination between client and architect. The result was that the signs were "slipped." At night-time the effect was fairly satisfactory, except that the signmaker had had to climb over some few projections to try to make his sign as presentable as possible. Often in the newest buildings no provision was made for the flood-lights. We were certainly behind the Continentals in this direction.

Selfridges had staged some very successful illuminations in their birthday celebrations, and the new Underground stations, which had had signs properly incorporated in their architecture, were examples of striking night illumination. In Paris to-day one could see several theatres and shop fronts designed from the outset with light as the principal element of decoration. Signs were naturally becoming more popular, but they were still considered too much from the advertisement point of view, and undoubtedly we were going to find restrictions, which were heavy enough at present. His view was that there were too many signs on buildings. They would find on some buildings the name advertised by three or four signs when one would have been much more effective. Bad lettering was to him the most virulent effect of the signmaker's art. He did not think it mattered whether they used Roman lettering or any other style, provided it was well designed. Lettering and signs were in many cases absolutely devoid of character—thoroughly commercial things. He thought it was necessary for a sign to have a frame, just as an oil-painting did. He suggested that there were possibilities for a sign in coloured lights, applying tubes of metal, copper, brass, and nickel; those tubes gave a sort of cascade of light which was extremely effective.

Mr. Dixon, in the discussion which followed, suggested the desirability of liaison between the R.I.B.A. and the signmakers.

Mr. A. W. Beuttell said he thought that to their next conference they should invite not only advertisers but architects.

A vote of thanks to Mr. Robertson was carried unanimously.

Mr. J. M. Woolnough then read a paper on "The Application of Electricity to Signs," in the course of which he offered a great number of suggestions of practical value to signmakers. Concluding, he said a great deal had been said against electric signs on the ground that they did not harmonise with the buildings on which they were placed, and that they had a deleterious influence upon the amenities of any district in which they were used. With qualifications he inclined to agree that there was some foundation for that statement. It was useless to deny that many signs were erected which did not harmonise with the buildings on which they were placed, did not adequately achieve their purpose as advertisements, and were so badly constructed, both mechanically and electrically, that they were difficult to maintain in proper condition. It should be realised that electric sign manufacture had now become an art as well as a science, and the designer, metal-worker, lampmaker, and electrician must all know their jobs if a satisfactory result was to be secured.

The conference ended with a vote of thanks to the Chairman.

Macclesfield Labour Exchange.

Mr. Remer asked in Parliament whether a site had been found for the new Labour Exchange at Macclesfield.

Mr. Lansbury: A site has been found, and my department's architects are considering whether it meets their requirements.

"IDEAL HOME" EXHIBITION

THE "Ideal Home" Exhibition which is now being held at Olympia provides a very full and varied display of all that goes to the making and furnishing of a house. With its more popular aspects we are not here concerned, but architects and builders will be interested especially in "The Village of Ideal Homes," "The House that Jill Built," the heating and lighting sections, building and garden sundries, the delightful "Gardens of the Artists," and in the excellent general planning, design of architectural features and decoration and lay-out of the exhibition, which are by Mr. Douglas G. Tanner, A.R.I.B.A. Below we give notices of some of the principal exhibits of building and architectural interest.

Anthracite Radiation, Ltd., 5, Newman-street, W.1. Stand 102, Main Hall, Ground Floor.—All those who are in sympathy with the objects of smoke-abatement (and who is not) will find this stand of interest. Smokeless ranges and boilers are shown here, including the "Kooksjoie" range. In white enamel and nickel-plated finish, this is especially suitable for blocks of service-flats, as it cooks for 12-14 people. "Glow-Worm" boilers for giving hot water and central-heating for modern houses are other principal exhibits, while a variety of grates and fires complete the display.

Bell's Asbestos and Engineering Supplies, Ltd., Slough, and 157, Queen Victoria-street, E.C.4. Stand 105, Main Hall, Ground Floor.—In these days, when the economics of things are constantly under observation, a stove which, it is claimed, will cook for up to 12 people at a fuel consumption of 8 lb. of coke or anthracite per day (25 cwt. per annum) is decidedly worthy of investigation. The "Aga" stove shown on this stand is claimed to be ready for use at any time of the day or night, and requires to be filled but once in 24 hours. The principle of this stove is that of a heat accumulator—the design being such that heat is stored or built up in the body of the stove during the hours when out of use. A valuable feature is that, unless desired, no heat is allowed to pass into the kitchen. Architects will find a visit to this stand not wasted.

John Blaikie and Sons, Ltd., 24, Fitzroy-square, W.1. Stand 123D, Empire Hall, Ground Floor.—Central heating and domestic hot-water supply by oil is gaining in popularity, and apparatus, the "Hardinge Precision Oil Burner," to this purpose will be found on this stand. Two types of burner are shown here, controlled by thermostats and provided with boiler temperature controls and numerous automatic safety devices.

Boulton and Paul, Ltd., Riverside Works, Norwood. Stand 161, Empire Hall, Ground Floor.—Architects for country houses, farms and bungalows who are considering the lighting problem should inspect the very interesting lighting and power plant demonstrated on this stand. Completely "fool-proof," this "Electolite" fully automatic lighting plant incorporates features which infallibly safeguard against damage resulting from neglect. The plant (which incorporates a pulley-drive) starts automatically from a small storage battery when three or more lights are switched on, and stops when two lights are left—the storage battery taking over. Safeguards against failure of oil or petrol supplies are also fitted with a variety of devices which render the plant "almost human" in operation. On Stand 196 (Small Hall, Ground Floor) the same firm displays various types of greenhouses.

Electrolux, Ltd., 153-5, Regent-street, W.1. Stand 114, Main Hall, Ground Floor, and Stand 297, Small Hall, Gallery.—Modern tastes in house and flat fitting tend constantly towards the practical, and architects fully realise the value of installing labour-saving appliances. Messrs. Electrolux, Ltd., have made a study of this subject, and their stands offer a wide selection of refrigerating plant, cleaners, floor polishers, etc. One of the most interesting is the water-softener, which, connected to the main, is guaranteed to repay its cost in a very short time. Ease of manipulation, installation and regeneration, high rate of flow, and the company's "service-after-purchase" policy are the plant's salient points, while saving in soap, tea and, not least, health are considerable advantages. Various models are shown.

W. N. Froy and Sons, Ltd., Hammersmith. Stand 80, Main Hall, Ground Floor, and Stand 142, Empire Hall, Ground Floor.—Plumbing fixtures of a very high standard engage the attention here. Some handsome marbles are to be found, and the exhibits altogether reach a considerably high level. A number of bathrooms give the opportunity for displaying these fixtures, which in some cases are in tinted porcelain. On Stand 142 a number of fireplaces of the same high quality of design, incorporating marbles and Empire woods, are displayed.

W. H. Gaze and Sons, Ltd., Kingston-on-Thames. Stand 21, Empire Hall, Ground Floor.—Architects or builders who are laying down hard tennis-courts should visit this stand, where various types of courts (in which this firm specialises) are displayed. The exhibit also shows "Horsecombe" old-world stonecraft, which garden architects will find of interest. Bird-baths, pigeon-cotes (in which pigeons are actually laying eggs), sundials, etc., are on view.

G. N. Haden and Sons, Ltd., Lincoln House, Kingsway, W.C.2. Stand 128A, Empire Hall, Ground Floor.—The "Oil-O Matic" oil-fuel burner, exhibited on this stand, is of the fully automatic type, particularly designed for central heating and hot-water service work, where it is essential to reduce costs to the minimum. Two models are shown, viz., the "J" type, for medium and large installations, and the "Junior," for small installations. We learn that over 500 "Oil-O-Matic" burners have been installed in houses and buildings of every description in various parts of the country.

Interoven Stove Co., Ltd., 156, Charing Cross-road, W.C.2. Stand 113, Main Hall, Ground Floor.—Architects and municipal officers who are engaged in housing work will find of use the demonstrations given of various stoves. The latest production is the 22-in. "Super-Interoven," which is taking the place of the original 20-in. stove. This is claimed to be an improvement on other convertible stoves in design and construction. Other patterns and varieties make this stand of particular interest.

Jenson and Nicholson, Ltd., Stratford, E.15. Stand 93, Main Hall, Ground Floor.—In this attractive stand the six cubicles represent various types of decorative treatment. "Modernistic" and "atmospheric" schemes are shown, together with the less bizarre and more homely ideas applicable to the ordinary middle-class house. Panels are hung round the stand as samples of the media available. Among the well-known products displayed on the stand are "Velure Enamel," "J and N. Plastic Paint," "Pintamur Flat Oil Paint," etc., etc.

Kelvinator, Ltd., 258, Gray's Inn-road, W.C.1. Stand 95, Main Hall, Ground Floor.—This exhibit presents the opportunity of inspecting the new 1930 line of Kelvinator super-automatic electric refrigerators for every kind of home and size of purse. All of these new cabinets possess the new and unique feature of "Ice-o-thermic" tubes for producing ice cubes in remarkably fast time. Four different temperatures are maintained, each directed and controlled to perform a distinct service without disturbing the others. A cold room of 150 cubic feet capacity—suitable for large country mansions, hotels and small traders—is also exhibited. The Kelvinator representatives will demonstrate any of the above equipment and give advice on food preservation generally.

W. T. Lamb & Sons, 43, Shoe-lane, London, E.C.4. Stand No. 138, Empire Hall, Ground Floor.—For the purpose of comparison, a selection from the large variety of facing bricks and roofing tiles made by this firm is here attractively exhibited in the form of panels, and visitors have the opportunity of judging the delightful colours and textures which are obtainable. Several excellent designs for brick fireplaces, each built in different coloured material, are shown, demonstrating their suitability for incorporation in modern interiors. The fireplace department of this firm, we understand, was started as a spare-time business, but already over 2,000 fireplaces have been sold, many going as far afield as Egypt and Greece. Other exhibits at this stand include garden decorations and ornaments in brick, bird-baths, sundials, etc. Quarry, floor and glazed tiles in colour are also exhibited in attractive variety.

Leeds Fireclay Co., Ltd., Wortley, Leeds, and 2, Cavendish-place, London, W.1. Stand No. 88, Main Hall, Ground Floor.—This exhibit comprises sanitary equipment, and "Lefco" fireplaces and garden ware. The sanitary fittings are in colour, the black and white and green and blue bathrooms being particularly attractive. The fireclay sanitary ware has the advantages of being non-crazing, highly glazed, and perfectly sanitary. A typical equipment provides a porcelain enamelled cast-iron bath, with Swedish green marble panels, and chromium plated taps, etc., bevelled plate mirror, pedestal lavatory basin, water closet, and chromium plated towel-airer. An excellent display of "Lefco" ware includes some attractively designed fireplaces which, with their softly coloured matt surface, would form an excellent centre for a scheme of decoration. As "Lefco" is a radiating material, the heat of the fire is not absorbed by it, but heat, it is claimed, equal to the old-fashioned fire is given with a much smaller fuel consumption. An interesting display of frost-proof "Lefco" garden ware includes a number of new and attractive designs, among which "Pan," a charming model by Mr. Percy Metcalfe, calls for special notice.

Petters, Ltd., Yeovil. London office: 75a, Queen Victoria-street, London, E.C.4. Stand No. 160, Empire Hall, Ground Floor.—Power plant is here shown in interesting and useful variety. Attention should first be drawn especially to a No. 102 Petter-light plant, comprising 3 B.H.P. Universal 1930 model engine, 1¼ K.W. belt-driven generator with switchboard, also a 950 watt auto-Petter-light plant for use without storage battery, and the Alpha-Petter lighting plant, complete with accumulators. Water supplies are dealt with by the Petter pumping plant and gear pump. A substantial circular saw and universal hopper-cooled engine, a combination suitable for cutting firewood, is on view, also 5 and 12 B.H.P. Petter "S" type oil engines, particularly suitable for garage use, through using waste lubricating oil as fuel. A working sectional model of the Petter Universal two-stroke engine is another interesting exhibit. The exhibitors are manufacturers of both large and small plants for every purpose, stationary, portable and marine—one of the most interesting being the atomic Diesel, cold starting, high compression, airless-injection, heavy-oil engine.

The Powell Duffryn Steam Coal Co., Ltd., 1, Great Tower-street, London, E.C.3. By-products: Messrs. Stephenson Clarke and Associated Companies, Ltd., 4, St. Dunstan's-alley, London, E.C.3. Stand No. 97, Main Hall, Ground Floor.—An exhibit on this stand of special interest to architects and builders is "Presotim," an antiseptic wood preservative and British coal tar product, which penetrates to the heart of the wood, thereby preventing decay, and simultaneously colours the surface, displaying the natural grain of the timber. There is an interesting

exhibit of a modern furnished bedroom and dining-room treated with this preservative. Also on exhibition is a bituminous black paint, "Presomet," which preserves all classes of iron and steel, is rust resisting, water and acid proof. Powell Duffryn smokeless coals are also shown, which are claimed to be a most economical fuel for central heating for the "Ideal" and all other types of domestic boilers.

Radiation, Ltd., Thimble Mill-lane, Aston, Birmingham. Stand No. 130, Empire Hall, Ground Floor.—The exhibit of the "Radiation" associated manufacturers, Arden Hill and Co., The Davis Gas Stove Co., Ltd., Fletcher Russell and Co., Ltd., Nautilus Fire Co., Richmonds Gas Stove Co., Ltd., Wilsons and Mathiesons, Ltd., and John Wright and Co., consists of gas appliances for domestic use. The latest type of gas fire is shown, in various exterior designs and finishes, each fitted with the new "Beam" (trade mark) fire front and the "injector-ventilator" device for ensuring thorough air change in the apartment. "New World" regulo-controlled cookers in "Rado" porcelain enamel finish and with "Regulo" automatic oven-heat control by means of which the whole dinner can be simultaneously cooked in the oven, without attention, are also shown. The latest types of gas water heaters in which the heat of the water is conserved by means of a special form of insulation, so enabling the gas consumption to be reduced to very negligible figures, are an important section of the exhibit, and there is a useful display of geysers and other gas appliances.

Smith & Wellstood, Ltd., 11, Ludgate-circus, London, E.C.4. Stand No. 104, Main Hall, Ground Floor. — The outstanding features of this exhibit are "Columbian" cookers in the new and attractive colours of very hard enamel. The fire chambers are suitable for burning smokeless fuel as well as ordinary coal, so there need be no soot in the flues, no blackleading, and no daily lighting. The new models have a commodious hotplate, a large oven, and water heating can be done from the fire chamber. The well-known "Wellstood" range is now shown with enamelled surfaces instead of tile work, an innovation which will be appreciated by every housewife. The "New Leader" range, which is extensively used for housing schemes, can also be supplied with enamelled surfaces. These enamels are so hard and durable that they can be struck with a hammer without being injured. Samples of portable coppers and domestic boilers are also shown. The No. 1 "Hydresse" water heater has probably attracted more attention than any others, because it can be provided with a device for drying kitchen refuse before it is burnt.

Spensers' "Silverlite." 5 and 6, London-street, Paddington, London, W.2. Stand No. 139, Empire Hall, Ground Floor.—On this stand are shown generators for supplying petrol air gas for (a) lighting, heating and cooking in country districts; (b) heating and cooking where electricity is supplying the light; (c) laboratory and industrial purposes. Special attention is drawn to the lighting fittings, which are all fitted with switch taps for instant lighting and their flush door switches; to the latest type of heat radiating burners which are fitted to the cookers. For heating, various types of portable radiators are exhibited. The application of "Silverlite" for poultry farming is also shown. The chief advantage of "Silverlite" is the simplicity of the generator, coupled with the fact that the gas produced is non-poisonous and non-asphyxiating. A small petrol engine unit is also shown, which can either be used for pumping water or for winding up the weights of the generators.

Triplex Foundry, Ltd., Great Bridge, Staffs. Stand No. 120, Main Hall, Ground Floor.—On this stand there is a comprehensive exhibit of "Triplex" grates, including the new "S" pattern, which is shown at work cooking for twelve persons, besides being connected to a domestic hot-water supply installation and heating a number of radiators. Those who are interested in a smaller type of grate should make a point of inspecting the "Tweenie" grate, which provides a good-sized cooking oven, 14 in. wide, 13 in. high, and 13 in. deep, and gives an excellent supply of hot water. Control is easy as there are only two dampers. A bright, cheerful sitting-room fire can be obtained by opening the doors in front of the fire and pushing in both dampers. The apparatus provides a low-priced yet efficient cooking and water-heating unit. Continuous cooking demonstrations are given at this stand.

"Vita" Glass Marketing Board, Aldwych House, London, W.C.2. Stand No. 180, Small Hall, Ground Floor.—The new form of glass which admits the invisible ultra-violet rays, and thereby ensures the penetration of sunshine into interiors, is, we are informed, growing in popularity. Most people have to spend a large proportion of the day within doors, but if windows are made of this glass, the vital part of sunshine, which is excluded by ordinary glass, is free to enter unchecked, to the benefit of the occupants. A visit to the Vita Glass Marketing Board stand, where full particulars of this invention can be obtained and a demonstration witnessed, will be of practical value and interest to architects and builders. "Vita" glass has been extensively fitted in the windows of houses, offices, factories, schools, hospitals, etc.

Woodlock Agents (England), Ltd., 25, Alfreton-street, Old Kent-road, London, S.E.17. Stand No. 252, Small Hall, Gallery.—Some useful devices for doors and windows are here exhibited. Chief of these is, perhaps, the "Fix" patent recessed espagnolette bolt, the main advantages of which are: it is recessed in the wood invisibly like a mortise lock; it shoots bolts at the top, bottom and side by the turn of one handle; the toggle action of the "shoots" pulls the door or window up and makes it draught- and dust-proof; it can be locked with a key and also be fitted with a master key system for hotel work; it can be had arranged as a theatre panic bolt to comply with municipal and other regulations; it is equally applicable to a massive door as to a casement window. Another exhibit of interest is the "Kenton" automatic door-holder, made of steel, a neat and simple device which functions by merely swinging the door to and fro. The holder is supplied in special sizes and finishes to suit any doors, and to fit any garage door from 3 ft. to 6 ft. wide. Another useful device is the "Woodlock" combined casement stay and fastener, which allows a window to open to any desired position, where it will stay fast.

FLOOD PREVENTION AT MIDDLESBROUGH

At a meeting of the Royal Sanitary Institute, held at Middlesbrough recently, Mr. S. E. Burgess, M.Inst.C.E., etc. (Borough Engineer and Surveyor, Middlesbrough), read a paper on "Flooding from Streams at Middlesbrough," in the course of which he said that by reason of unusual storms and very heavy rains which occurred in Middlesbrough and District during 1928 and 1929, considerable flooding of areas of public highways and houses was experienced. Up to the time when the Snowdon-road pumping station was installed, together with the 7 ft. diameter outfall sewer therefrom, flooding was constantly experienced in the Newport and Marsh-road districts of the borough, to a depth varying from a few inches to 2 ft., and as far as 27 streets and 394 houses were flooded during a storm, but since that date the flooding of this particular district had become a thing of the past and was not now experienced. Insufficiency of sewer discharge was the cause. During abnormal rainstorms the pumping plant, both at Snowdon-road and Cargo Fleet pumping stations, pumped altogether a quantity of flood water from the trunk sewers in 8 hours, on one day—9.20 p.m. to 5.30 a.m.—no less than 28 million gallons, which was equal to a weight of 125,000 tons; this equalled 5 tons of water from every house in Middlesbrough.

As far as the sewers of the borough were concerned, since the installation of the Snowdon-road pumping station and the carrying out of new main trunk sewers, no flooding was now experienced during times of heavy rainfall, and at his visits of inspection throughout the town during storms there was not any flooding from the sewers even at places where this used to occur; this was due to the works of pumping plant and sewers bringing about relief and banishing anxiety which existed formerly, due to insufficiency of sewer capacities.

The flooding which did occur in the borough during 1928-1929 was not from sewers but by water overflowing the banks of the streams and becks in the watershed area of some 4,000 acres. The flooding in this wise occurred at the following parts of the town:—North Ormesby-road (from railway crossing along Borough-road, Clyde-street, Colne-street, Atlas-street, Avon-street and Ormesby-road), Emerson-avenue, Deepdale-avenue (Marton-grove Housing Estate), The Prospect, Arlington-road and Emerson-avenue. This was from the Marton West Beck, a distance of 5 miles to its source, which took a drainage area of 4,000 acres; this beck overflowed its bank all along its route.

Having given details of works to be undertaken to prevent flooding, the speaker said the summary of the estimated costs of the scheme outlined was as follows:—

Culverts, etc., under North Ormesby-road and under the London and North Eastern Railway	£26,000
New 4 ft. diameter culvert at Marton-grove Housing Estate	£13,100
New 2 ft. 9 in. diameter culvert—Deepdale-avenue to Marton-road	£6,600
Total estimated cost	£45,700

In addition to this there would be the costs of further schemes of beck and bridge widenings. The contract was let to the lowest tenderers—Messrs. John Pearson, Ltd., public works contractor, of Stainton-in-Cleveland, Yorks, and after the necessary contract was fixed up and signed, the work was commenced by them on January 30 last. The contractors were making very good progress with the works, and it was estimated that the whole scheme would occupy about 18 months. When this work was carried out there was no doubt that considerable relief would be obtained from flooding during abnormal rainstorms, such as experienced during the year 1928, but absolute prevention of any flooding whatever would not be satisfactorily made until other schemes of stream and beck widenings were undertaken.

New South Africa House.

The High Commissioner for South Africa on April 1 signed the lease of the new building, 73 to 75, The Strand, which he and his staff will occupy during the demolition and reconstruction of the present office buildings on the east side of Trafalgar-square. The demolition is due to begin in October, and the erection of the new building will start as soon after as possible. Sir Herbert Baker has been given a free hand in the designing of the new South Africa House, and it is understood that, while keeping in mind the desirability of harmonising the exterior with the general character of the architecture of Trafalgar-square, he will give the interior a distinctly South African atmosphere, using hardwoods and marbles from the Cape.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *office not later than Tuesday evening.*

Acton.—Depot.—Mr. F. E. Simpkins, of Estate Office, Chase Estate, Park Royal, N.W.10, is the architect for a service depot for the Standard Motorcar Co., Ltd., Standard-road, Minerva-road, W.3.

Battersea.—Silo.—Messrs. Mark Mayhew, Ltd., flour millers, of 112, Church-road, S.W.11, propose erecting a large silo on the site adjoining their mills. The architects are Messrs. Gelder and Kitchen, Alfred Gelder-street, Hull.

Becontree.—Houses.—The L.C.C. recommend £17,640 in respect of the development of the Barking (No. 12) section of Becontree, to cover the cost involved by the erection of about 36 additional houses, including all incidental expenses.

Bermondsey. — Additions. — Messrs. Truman, Hanbury, Buxton & Co., Ltd., have accepted the estimate of Mr. H. V. Clogg, 159, Hanbury-street, E.1, at £3,787, for alterations and additions to the "Victoria" beer-house, Pages-walk, S.E. Mr. A. E. Sewell, L.R.I.B.A., 91, Brick-lane, E.1, is the architect.

Bethnal Green.—Dwellings.—The L.C.C. recommend £150,000 in respect of the erection of seven blocks of dwellings, etc., on Collingwood estate, Brady-street area, Bethnal Green.

Bromley.—Offices.—Messrs. Grace and Farmer, of 4, Wardrobe-court, St. Paul's churchyard, E.C.4, have prepared plans for offices to be erected for the Woolwich Equitable Building Society.

Cannon-street.—Reconstruction.—Nos. 16-18, Cannon-street, the premises formerly occupied by Selincourt Bros., Ltd., are to be reconstructed for the Prudential Assurance Company, of Holborn Bars, W.C.1.

Chancery-lane.—Alterations.—For alterations to the branch post office, H.M.O.W. accepted the estimate of Messrs. Negus, Ltd., 1, Laurence Pountney-hill, E.C.4.

Croydon. — Rebuilding. — Nos. 100-102, High-street is to be rebuilt for the Pure Food Co. Messrs. Blake, Son and Williams, surveyors, of High-street, Croydon, are preparing the plans.

Croydon.—Church.—Messrs. Gunton and Gunton, of Empire House, St. Martin's-le-Grand, E.C.1, have prepared plans for the erection of a new Wesleyan Church and schoolroom on a site at the junction of Wickham-road and Shirley-road.

Deptford.—Building.—Mr. W. J. Swain, of St. Stephen's House, Victoria Embankment, S.W.1, has made application to the B.C. for the erection of a building on the eastern side of Briant-street, S.E.

Ealing.—Houses.—251 houses are to be erected on the Wood End Green estate by the Selected Land and Property Co., Ltd. Messrs. H. M. Grellier and Son, Palace-chambers, Bridge-street, Westminster, S.W.1, architects.

East Ham.—Exchange.—The B.C. has offered to H.M. Office of Works the portion of the Barking-road site having a frontage to Barking-road and a return frontage to Melbourn-road for the erection of an employment exchange.

Edgware.—Rebuilding.—The estimate of Messrs. Brown, of Watford, has been accepted for the rebuilding of the "Railway Hotel," Station-road, for Messrs. Truman, Hanbury, Buxton & Co., Ltd. Mr. A. E. Sewell, L.R.I.B.A., 91, Brick-lane, E.1, is the architect. The tender price is £24,966.

Eltham.—Houses.—Messrs. Eley & Allen, architects, of 83, Powis-street, Woolwich, have submitted an application to the B.C., on behalf of Messrs. C. & D. J. Barwell, builders, for the erection of 44 houses in Sidcup-road, Eltham.

Fulham.—Rebuilding.—The "Seven Stars" public-house, North End-road, is to be rebuilt for Messrs. Fuller, Smith and Turner, Griffin Brewery, London, W.4.

Fulham. — Institute. — New Wesleyan schools and institute are being built at Munster Park by Messrs. G. Bollom & Sons, Ltd., building contractors, of Acton, W.3, to the plans prepared by Mr. J. Ross Wills, architect, Abbey House, Westminster, S.W. The constructional steelwork will be supplied by Messrs. Young & Co., 6, Queen Anne's-gate, Westminster, S.W.1.

Hendon.—Centre.—Tenders are being invited for erection of a child welfare centre for the Hendon U.D.C. Mr. A. O. Knight is the Council engineer and surveyor.

Islington.—Alterations.—The L.C.C. recommend £2,602 in respect of structural alterations at the Blundell-street L.C.C. school

Langham-place.—Premises.—The Western Construction Co., Ltd., Artillery House, Westminster, S.W.1, have secured the contract for the erection of new banking premises at the corner of Langham-place and Cavendish-place, W.1, for Messrs. Barclays Bank, Ltd. Sir Herbert Baker, A.R.A., F.R.I.B.A., 14, Barton-street, S.W.1, is the architect.

Lewisham.—Extension.—The B.C. has recommended the tender of Messrs. G. E. Wallis & Sons, Ltd., of Medway House, 11/12, Old Cavendish-street, W.1, for the erection and completion of the new town hall, shops and offices, at the sum of £124,444, with an extra sum of £2,500 in respect of joinery. Messrs. Bradshaw Gass & Hope, of 19, Silverwell-street, Bolton, are the architects.

Ponders End.—Buildings.—Messrs. H. Yager (London), Ltd., are to carry out a further extension of their cabinet factory. The architects are Messrs. Dunsmore Bros., of Survey House, Brockley Rise, Honor Oak Park, S.E.23.

Purley.—Exchange.—H.M.O.W. accepted the tender of Messrs. Negus, Ltd., 1, Laurence Pountney-hill, E.C.4, for new telephone exchange.

Rathbone-place.—Premises.—The L.C.C. have consented to the application of Messrs. L. G. Mouchel & Partners, 38, Victoria-street, S.W.1, in connection with the erection of a building at 19-22, Rathbone-place, and 1-6, Cresse-street, St. Marylebone.

Southwark.—Enlargement.—The L.C.C. recommend £26,070 in respect of the enlargement of the Walworth central L.C.C. school.

Southwark. — Housing. — We understand that Lady Shelley-Rolls has offered to sell to the Southwark Borough Council, for the nominal price of 1s., a site in Walworth for the erection of working-class dwellings. The gift was accepted, and the council decided to consider a housing scheme on the site.

Streatham.—Additions.—Messrs. Bridge and Co., 91, Effra-road, Brixton, S.W.2, have acquired the £4,000 contract for additions to the premises of the Rawlings Manufacturing Co. in Larch-road, S.W.12. The architect is Mr. A. W. T. Richards, F.S.I., Bank-chambers, 211, High-road, Streatham, S.W.16.

Sutton.—School.—Plans have been approved for the erection of a new school for 700 children at New Town, for the Surrey E.C. The architects to the Education Committee are Messrs. Jarvis and Richards, 60, Tufton-street, S.W.1.

Wembley. — Rebuilding. — For rebuilding the "Norfolk Arms" in Llanover-road, Messrs. Truman, Hanbury, Buxton & Co., Ltd., have accepted the estimate of Mr. Henry Knight, of Tottenham, at £12,027. Mr. A. E. Sewell, L.R.I.B.A., 91, Brick-lane, E.1, is the architect.

Winchmore Hill.—Houses.—Messrs. A. T. Rowley are to erect 47 houses at Wades Hill.

BUILDERS' CLERKS

The 50th annual dinner of the Builders' Clerks' Benevolent Institution was held at the Holborn Restaurant on April 2, with the president, Mr. Basil C. Aldous, in the chair. Amongst those present were: Major A. D. S. Rice, Messrs. J. M. Theobald, S. H. F. Pulley, A. B. H. Colls, R. Aslebrook Hinds, C. A. Ash, A. J. Bristow, W. Cook, F. A. Minter, H. Hickling, H. F. Webb, T. H. Wilson, A. Winlo, C. H. Kearley, Clifford Trollope, Percy Gleed, R. L. Roberts, Godfrey Sykes, P. C. Culver, G. H. Parker, W. E. Rice, A. B. Falkner, H. D. Holloway, G. A. Dean, F. Collis, F. A. Wallis, and the Secretary, Mr. John Austin.

The loyal toasts honoured,

The President submitted the toast of the "Institution." During its 64 years of life, the Institution had paid out £25,600 in pensions and £1,201 in temporary relief. In addition, £782 had been set aside as a presentation for the Alexandra Orphanage. The trouble was that that presentation was running out and £250 was needed if it was to continue its useful work. Friends this year had been very generous, and £750 had been subscribed. Mr. Palmer-Jones had been good enough to bring the sum up to £800 in memory of his nephew, Mr. Leo Jones. They all appreciated that generous support because there were many sad cases about. It was a great thing that the committee was able to grant pensions, and to add a little extra at Christmas. The rules had been altered to allow not only builders' clerks but their orphans benefits. He was therefore going to appeal to those present to bring the fund up to £1,000. In conclusion, the President paid tribute to the work of the committee, and especially to the hon. treasurer and the secretary. The Institution was admirably served by both officials.

The toast of "The Guests" was also given by the President. They were the mainstay of the Institution, and the way in which they supported the Institution's activities was a very real pleasure. All wished the Institution success and hoped it would go on from strength to strength.

Mr. J. M. Theobald replied in characteristic fashion. His advice to all builders' clerks was to work hard and not to worry. They might then become a "boss" and work 15 hours a day and worry all night!

Major Rice proposed the toast of "The President," in whom, he said, they had a gentleman who, when he had to say anything, said it with vigour and effect. There were a lot of things to do and he had done them well. He was glad to say, said the speaker, that the company present had subscribed a further £153 9s. 6d., to which the President had added £46 10s. 6d., making a grand total of £1,000 for the year.

The President, responding, offered thanks to the company for the generous manner in which they had responded to his appeal. He could assure them that the money would be well spent.

Business Firm's Dinner and Dance.

On Saturday evening last, Messrs. Haywards, Ltd., the structural engineers of the borough, held their annual dinner and dance at the Imperial Hotel. Mr. A. L. Collins occupied the chair, supported by Mr. G. F. Pittar, Mr. H. T. Walker, Mr. J. G. Willmore, and Mr. A. T. Davies, directors of the company. The interesting event of the evening was the presentation to Mr. Charles Adcock of a cheque in recognition of his fifty years service with the firm. Mr. W. H. Smith, director of Messrs. Abbott & Co., Ltd., iron founders, Falkirk, supplemented this tribute with a silver cigarette case, suitably inscribed. The toast of "The King" having been honoured, "The Chairman and Board of Directors" was proposed by Mr. P. B. Munton, and Mr. Collins replied. Mr. Hine then proposed "Our Guests," and Mr. W. H. Smith responded. The remainder of the evening was given up to dancing, and a most enjoyable time was spent.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aldershot	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Alfreton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Alnwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashford (Kent)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ashington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aylsham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bradford-on-Avon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Brentwood	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bridgwater	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bridlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromsgrove	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromyard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bungay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Buxton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Carlisle	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chorley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cirencester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Clacton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cranbrook	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Deal	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Devizes	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dewsbury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E.Glam. (Mon. Val.)	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ely	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Exeter	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Great Yarmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harpenden	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hereford	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Herne Bay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hunstanton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huntingdon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
King's Lynn	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lancaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington Sp	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leighton Buzzard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Littlehampton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Liverpool	1/9	1/9	1/9	1/10	1/9	1/9	1/9	1/3½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London:								
12 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/7½	1/3½
12-15 m. radius	1/8	1/8	1/8	1/8*	1/8	1/8	1/7	1/3
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lowestoft	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Luton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Macclesfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harb'rough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Matlock	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Melton Constable	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Melton Mowbray	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Merthyr Tydfil	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-ur-Lyme	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
New Forest	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Nuneaton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Paignton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Pontypridd	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Redcar	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Redditch	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Reigate	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Retford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ripon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Saffron Wa den	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sawbridgeworth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Saxmundham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Scarborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Southampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southend-on-Sea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stowmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Stratford-on-Avon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swaffham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Tamworth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Taunton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Thetford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsden	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warminster	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wells (Norfolk)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Weston-sup-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Whitby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wisbech	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Woodbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worthing	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wrexham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wycombe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wymondham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
York	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 741.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders, and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A. Surveyor, S. Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc

APRIL 14.

Aberdeenshire. — Additions. — To (1) Hatton (Cruden) and (2) Green of Udny public schools, for E.C. E. L. Williamson, architect, 154, Union-st., Aberdeen.

Acock's Green, Birmingham.—Public Library.—City Librarian, Reference Library, Ratcliff-place, Birmingham. Dep. £2 2s.

Birmingham.—Centre.—Maternity and child welfare centre at Allens-cross farm estate, Northfield, for T.C.—Messrs. Collier and Keyte, architects, 30, Paradise-st. Dep. £1 1s.

***Chatham.**—New School.—Erection of, at Luton-road, for the T.C. R. L. Honey, L.R.I.B.A., F.S.I., Town Hall. Dep. £3 3s., payable to the "Borough Treasurer."

Dublin.—Houses.—641, on Cabra housing area, for C.B. City Architect, Exchange-buildings, Lord Edward-st. Dep. £5 5s.

Edinburgh.—School.—New primary school at Wardie, for E.C.—J. M. Johnston, architect, 47, Charlotte-st., Leith.

Eidwick.—Installation.—Hot water apparatus at sanatorium, near Bingley, for West Riding C.C.—West Riding Architect, County Hall, Wakefield.

Glasgow.—Improvements.—Jobbing work, viz.: Mason work, plumber and gasfitter work, ironmongery, lime and cement, paints and oils, for T.C. James G. Ewan, manager, 20, Irongate, C.1.

Glasgow.—Additions.—Also alterations to house, East Clyde-st. police barracks, for T.C. Master of Works, 64, Cochrane-st.

Jedburgh.—House.—Dwelling-house at Telephone Repeater Station, for H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Kidderminster.—Houses.—86 non-parlour type, on Greatfield housing estate, for T.C.—J. Hawcroft, B.E. and S., 110, Mill-st. Dep. £2 2s.

Kingswinford.—Cottages.—60 non-parlour type cottages on Belle Vue site, Wordsley, for R.D.C. W. Meredith, S. Dep. £2 2s.

Lancaster.—Building.—Site works and foundation works for transforming stations at Ribble, Preston, and Lancaster, for Central Electricity Board. R. H. Fox, secretary, Trafalgar-buildings, 1, Charing Cross, W.C.2. Dep. £3 3s.

Liverpool. — Dismantling. — Existing sectional timber school building at Leamington-rd., Norris Green, and re-erecting same on site at Wellesbourne-rd., Norris Green, for T.C. Land Steward and Surveyor. Dep. £1 1s.

London.—Wall.—Construction of new concrete river wall about 1,483 ft. in length, front of Wandsworth-pk., for L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Dep. £2.

Manchester.—Foundations.—For boiler No. 13 at Barton power station, for T.C. H. C. Lamb, Chief Engineer and Manager, Electricity Department, Town Hall. Dep. £2 2s.

New Windsor.—Additions, etc.—To Victoria-st. Council school, for T.C. J. A. Williams, Secretary for Education, Borough Education Offices.

Plymouth.—Repairs.—At 39 and 40, New-st., for T.C. R. J. Fittall, T.C.

APRIL 15.

Bedford.—Pavilion.—Brick pavilion in Russell-pk., for T.C. N. Greenshields, B.E. and S.

***Beds.**—Houses.—(a) 46 at Arlisey; (b) 10 at Clifton; for the Biggleswade R.D.C. Clerk to the Council, 2, London-rd., Biggleswade. Dep. £2 2s.

Cosely.—Houses.—10 on Coppice site, for U.D.C. G. Edwin Mitchell, E. and S. Dep. £2 2s.

Coseley.—Houses.—108 on Lanesfield site, for U.D.C.—G. Edwin Mitchell, E. and S. Dep. £2 2s.

Glasgow.—Houses.—90, at Carntyn, for T.C. D. Stenhouse, T.C.

Gravesend.—Houses.—30 C-type and 128 D-type, on King's Farm estate, for T.C. J. G. Bennett, L.R.I.B.A., 5, Woodville-ter. Dep. £2 2s.

Ireland.—Building.—Reconstruction of stations for Garda Siochana at Brosna, Co. Kerry; Dunkineely, Co. Donegal; Ballyfeard, Co. Cork; for Commissioners of Public Works. T. Cassedy, Secretary, Office of Public Works, Dublin. Dep. £1 each.

Leeds.—(a) Ironwork, (b) builders' work, in connection with the provision of emergency staircases at (1) City of Leeds school, (2) Green-lane Council school, for E.C.—J. Graham, Director of Education, Education Offices.

Leigh.—Garage.—Reconstructing existing workshops into bus garage and offices, for T.C. T. A. Clare, B.E. and S.

Liverpool.—Painting.—Interior and exterior painting, retail and wholesale fish markets, for T.C. Steward and Surveyor.

***Louth.**—Houses.—Erection of, on the High Holme-rd. site, for the Corporation. H. E. Roberts, Town Clerk. Dep. £2 2s.

Mitcham. — Building. — Additions to Council offices, Vestry Hall, for U.D.C. Chart, Son & Reading, architects and surveyors, Union Bank-chams., Croydon. Dep. £5.

Shawforth.—Painting.—Oak-ter., Shawforth. — Bower, 89, Oak-ter., Shawforth.

Slough.—Convenience.—At Salt Hill playing fields, for U.D.C. A. Bromly, E. and S.

APRIL 16.

Ashton-under-Lyne.—Stripping.—Portion of roof of Market Hall, and boarding, felting and reslating same. Eaton, Sons & Cantrell, architects, Stamford-st.

Hull.—Heating.—Installation of low-pressure hot-water heating apparatus at certain schools, for E.C. R. C. Moore, Director of Education.

Ireland. — Building. — Erection of stations for Garda Siochana at Tulsk, Co. Roscommon; Rathgormar, Co. Waterford, and Corofin, Co. Galway, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

Lochaber. — Housing. — Housing scheme at Mallaig, for D.C. Geo. Gordon and Co., architects, Queensgate, Inverness.

London.—Decoration.—At (a) Bloomfield estate, Central-hill, Upper Norwood, section B, 106 dwellings; (b) Holderness and Portobello estate, Knight's-hill, West Norwood, 155 dwellings; (c) St. Louis estate, Auckland-hill, West Norwood, and Redan-ter. estate, Brixton, 92 dwellings; (d) Prince's-rd. dwellings, Prince's-rd., Kennington, for Lambeth B.C. Osmond Cattlin, B.E.

Wembley.—Building.—Building and sanitary work, comprising front wall, construction small brick and concrete strong room and equipment of lavatories in connection with temporary offices at High-rd., for U.D.C. C. R. W. Chapman, E. and S. Dep. £1 1s.

Wembley.—Foundations.—Certain concrete and steel foundation work in connection with erection of temporary offices at High-rd., for U.D.C. C. R. W. Chapman, E. and S. Dep. £1 1s.

Wembley.—Buildings.—Temporary offices in timber and asbestos at High-rd., for U.D.C. C. R. W. Chapman, E. and S. Dep. £2 2s.

Wheatley Hill.—Pavilion.—Pavilion and hall on welfare ground, for Wheatley Hill Colliery Welfare. Francis Quin, Secretary, 11, Ford-st., Wheatley Hill, Co. Durham.

York.—Houses.—46 non-parlour in Tuke-av., Tang Hall estate, for T.C. F. W. Spurr, City E. Dep. £2 2s.

APRIL 17.

Ireland.—Building.—Erection of stations for Garda Siochana at Glenamoy, Co. Mayo; Tullyvin, Co. Cavan, and Ballyjamesduff, Co. Cavan, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

Leeds.—Building.—Conveniences at Lower Town-st., Bramley; urinal, Sutherland-st., New Wortley; painting offices occupied by Health Department, Market Hall; for T.C. J. E. Acfield, City E.

Leighton Buzzard. — Houses. — Mill-rd., for U.D.C. B. H. Robjant, S. Dep. £2 2s.

Mitcham.—Cinema.—The Chairman, Majestic Theatre (Mitcham), Ltd., 151, Gt. Portland-st., London, W.1.

Mull of Kintyre.—Building.—At Mull of Kintyre Lighthouse Station, to accommodate wireless plant, for the Commissioners of Northern Lighthouses. D. A. Stevenson, E., 84, George-st., Edinburgh. Dep. £2 2s.

Northwich.—70 cottages, for R.D.C. J. Birtwistle, Housing S. Dep. £2 2s.

Okehampton.—Additions.—Also alterations at North-st. Junior Council school, for Devon E.C. County Architect, 97, Heavitree-rd., Exeter. Dep. £1 1s.

Romsey.—Lighting.—Electric lighting of Town Hall, for T.C. B.S.

St. Ives.—Houses.—17, parlour-type, on Craze Garden estate, Higher Ayr, for T.C. H. E. Phillips, B.S. and E. Dep. £2 2s.

Sheffield. — Demolition. — Central Reference Library, Surrey-st., for T.C. W. G. Davies, F.R.I.B.A., City Architect. Dep. £1.

Wembley.—Hall.—Premises in London-road, for Workmans' Hall, Field and Stewart, architects and surveyors, 40, St. Andrew's-av. Dep. £1 1s.

APRIL 18.

Dagenham.—Fencing.—130 lin. yd. 4 ft. 6 in. w.i. fencing in Valence-pk.; and 260 lin. yds. 5 ft. 6 in. w.i. fencing in Central-pk., for U.D.C. E. and S.

Dundee.—Painting.—Of new secondary school, Perth-rd., for E.C. Thoms and Wilkie, F.R.I.B.A., 21, South Tay-st.

APRIL 19.

Durham.—School.—New Council school at Witton Gilbert to accommodate 224 scholars, for County E.C. F. Willey, F.R.I.B.A., 34, Old Elvet, Durham.

Edinburgh.—Additions.—Also alteration to Corstorphine school, for E.C. J. Stewart, Executive Officer, Education Offices, Castle-ter.

Tenby.—Houses.—22 parlour and 4 non-parlour type, for T.C. B. Morley, B.S. Dep. £3 3s.

APRIL 21.

Ashford (Kent).—Centre.—Maternity and child welfare centre in Vicarage-lane, for U.D.C. S., 5, North-st.

APRIL 22.

Brighton.—Cottage.—Police cottage at Rottingdean, for C.B. D. Edwards, B.E. and S. Dep. £2 2s.

Grimsby.—Block.—Three tuberculosis pavilions, observation block, administration block, etc., at Scartho Sanatorium, for C.B. H. Garcia Whyatt, B.E. and S. Dep. £3 3s.

Ilford.—School.—New school buildings to be called "The Beal Central School," on site between Ley-st., Charter-av. and Benton-rd., for T.C. L. E. J. Reynolds, Assoc.M.Inst.C.E., Architect to E.C. Dep. £5 5s.

***Redhill.**—Houses.—Erection of, for the Reigate T.C. Town Clerk, Municipal-buildings, Reigate. Dep. £3 3s.

West Riding.—Barns.—For (1) Minskip, near Boroughbridge, two 3-bay Dutch barns; (2) Dunsforth, near Boroughbridge, one 3-bay Dutch barn; (3) Nether Poppleton, near York, one 4-bay Dutch barn; (4) Barwick-in-Elmet, near Leeds, cowhouse and one 4-bay Dutch barn, for C.C. West Riding County Land Agent, County Hall, Wakefield. Dep. £1

APRIL 23.

Leeds.—Installation.—Plumbers and heating engineers for hot water installation for washing trams required in extension of Swinegate tram depot, for T.C. Chorley, Gribbon & Foggitt, architects, 3, Park-place.

London, N.W.2.—Child Welfare Centre.—For the Hendon U.D.C. Clerk to the Council, Town Hall, Hendon, N.W.4. Dep. £4 4s.

APRIL 24.

Reading.—Building.—Alteration of lending and reference departments at Central Public Library, for C.B. B.S. Dep. £2 2s.

APRIL 25.

Bath.—Reconstruction.—Statutory Hospital, for T.C. F. P. Sissons, City E. Dep. £5 5s.

Bristol.—Houses.—216 houses, for T.C. S. McKenzie, City Engineer and Surveyor, Housing Department, 51, Prince-st. Dep. £1.

Droitwich.—Houses.—Forty non-parlour type on Burrish-st. housing estate, for T.C. R. E. Hulse, B.S. Dep. £2 2s.

Pontefract.—Building.—(1) New premises for Pontefract King's School; (2) Headmaster's house at Pontefract King's School, and laying out of playing fields and repairs to fences, for West Riding E.C. Education Officer, County Hall, Wakefield.

St. Albans.—Girls' Central School.—For the Herts C.C. County Surveyor and Architect, Hatfield, Herts. Dep. £3 3s.

West Riding.—Buildings.—New premises for Pontefract King's school; headmaster's house at Pontefract King's school; laying out playing fields and repairs to fences, for C.C. Education Officer, County Hall, Wakefield.

APRIL 28.

Alton.—Houses.—48 on Spittal Hatch estate, for U.D.C. G. H. Webb, S. Dep. £1 1s.

Doncaster.—Houses.—24 houses and road work with connection therewith at Council's estate, Rossington, for R.D.C. W. R. Crabtree, S.

Eccles.—Extension.—Electricity sub-station in Corporation-rd., for T.C. B.E. and S. Dep. £2 2s.

***Faversham.**—Houses.—Erection of, for the Corporation. Town Clerk, 20, West-street. Dep. £3 3s.

Llandyssul.—Building.—Police station in Bridge-st., and adjoining chemist's shop, for Cardiganshire Standing Joint Committee. J. Davies, C.S., County Surveyor's Office, Horeb, Llandyssul.

Newtownards. — Installation. — Central heating, electric lighting in conversion existing workhouse into district hospital, for B.G. F. Westlake Parkinson, Consulting Engineer, 16, Chichester-st., Belfast.

APRIL 29.

Ecclesfield.—Installation.—Low pressure hot water heating installation, and plumber's work in domestic hot water installation, at secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.

London.—Flats.—60 tenement flats on Sydenham (Winchfield-rd.) housing scheme, for Lewisham B.C. B.S. Dep. £2 2s.

Normanton.—Installation.—Low pressure hot water heating, and plumber's work in domestic hot water installation, at grammar school, for West Riding E.C. Education Officer, County Hall, Wakefield.

***Poole.**—Alterations and Additions.—To the Grammar School, Kingsland-road. Borough Engineer, Municipal-buildings. Dep. £5 5s.

Portsmouth.—Blocks.—Two new blocks for 124 patients and for maintenance thereof, for Committee of Visitors of the Mental Hospital, Milton. E. H. Harvey, architect, The Square. Dep. £5.

APRIL 29.

Watford.—Houses.—Four at Maple Cross, Rickmansworth, for R.D.C. S., 9, Market-st. Dep. £2.

APRIL 30.

***Newport (Salop).**—Houses.—Erection of, for the U.D.C. Clerk to the Council, Council buildings. Dep. £2 2s.

Sunderland.—Block.—Administration block at Royal Infirmary. Wm. and T. R. Milburn, F.R.I.B.A., 17, Fawcett-st. Dep. £2 2s.

MAY 1.

London.—Alterations.—Internal structural alterations of original building of Charlton House, Charlton, and conversion annexe into public lending library, for Greenwich B.C. F. J. Simpson, T.C. Dep. £2 2s.

MAY 5.

Crewe.—New School.—Erection of, for the E.C. Director of Education, Municipal-buildings. Dep. £5 5s

MAY 10.

Dundee.—Building.—Reinforced concrete pump chamber in river Tay under Eastern Wharf, together with reinforced concrete piled foundation for circulating water pipe, approximately 515 ft. long, at Carolina Port, for T.C. D. H. Bishop, General Manager and Engineer, Electricity Supply Department, Dudhope Crescent-rd.

NO DATE.

Doncaster.—School.—For E.C. Athron & Dyson, architects, Dolphin-chams., Market-place. Dep. £2 2s.

Eggbuckland (Devon).—Tenders are invited for repointing tower of Eggbuckland Church. R. J. Townsend, Church Secretary, Doidges Farm, Eggbuckland.

Harrogate.—Premises.—For Harrogate Masonic Trust, Ltd. Frank Tranmer, architect, Westminster-chams. Dep. £2 2s.

Hull.—Demolition.—Certain property in New George-st. City Architect.

Llanllwni.—Restoration.—Of church, for Vicar and Churchwardens of St. Luke's Church, Llanllwni, Carmarthenshire. Capt. W. E. Ellery Anderson, Ecclesiastical Architect, 6, Oriel-place, Cheltenham.

Norden.—Painting.—Interior of St. Paul's day school (Church of England). Rev. T. H. Evans, Vicar, Norden Vicarage.

Southend-on-Sea.—Demolition.—Of buildings and clearance of site recently occupied by Lukers Brewery, High-st. W. Stewart, F.R.I.B.A., 220, Whitechapel-rd., E.1.

MATERIALS, etc.

APRIL 14.

Bootle.—Granite.—For C.B. B.E.

Plymouth.—Granite.—2,000 yds. of 12 in. by 8 in. granite kerb, for T.C. J. Wibberley, A.M.Inst. C.E., City E

Swanscombe.—Road Materials.—For U.D.C. L. E. Croucher, S.

APRIL 15.

Glasgow.—Jobbing Work.—For T.C. D. Stenhouse, T.C.

Knottingley.—Road Materials.—For U.D.C. S.

Loughton.—Highway Materials.—For U.D.C. H. White, S., High-rd.

Manchester.—Highway Materials.—For T.C. F. E. Warbreck Howell, T.C.

APRIL 16.

Edinburgh.—Builders' Materials.—For P.C. W. M. Mowat, clerk, Parish Council-chambers, Castle-ter.

Kettering.—Road Materials.—For R.D.C. R. J. Parker, S., London-rd.

Kingston-upon-Hull.—Paving Blocks.—For T.C. T. Thomas, City E.

Motherwell and Wishaw.—Highway Materials.—For T.C. B.E.

APRIL 19.

Ebbw Vale.—Tarmacadam.—For U.D.C. E. and S.

APRIL 21.

Ashford (Kent).—Road Materials. For U.D.C. A. F. Webster, S.

APRIL 22.

Rathmines and Rathgar.—Cement.—For U.D.C S.

APRIL 23.

Dundee.—Sand.—For Corporation Transport Dept. D. P. Morrison, General Manager, Transport Office.

APRIL 24.

London. — Building Materials. — For M.W.B. Chief Engineer, 173, Rosebery-av., E.C.1.

London. — Building Materials. — For G.W.R. F. R. E. Davis, secretary, Paddington Station, W.2.

ENGINEERING, IRON AND STEEL

APRIL 14.

Aberdeen. — Reconstruction. — Dismantling and removal of existing carriageway, footways, and cross beams, etc., of Wellington Suspension Bridge, and reconstruction in new materials, and works contingent thereto, including painting of existing permanent ironwork, for T.C. T. F. Henderson, Burgh Surveyor and Water Engineer.

Hadleigh.—Water Supply.—140 tons of vertically cast 3-in., 4-in. and 5-in. cast-iron spigot and socket pipes, together with necessary specials; also excavating trenches, hauling, laying, jointing and testing about 3½ miles of 3-in., 4-in. and 5-in. water mains, supply and fixing necessary sluice valves, air valves, washout valves, fire hydrants, etc.; construction concrete reservoir of 90,000 gallons; building engine house at Lady-lane, for U.D.C. Taylor & Wallin, engineers, 1, Saville-place, Newcastle-on-Tyne. Dep. £5.

Southend-on-Sea.—Shelter.—Timber platform and shelter on sea wall near Leigh bathing station, for C.B. R. H. Dyer, B.E. and S. Dep. £1 1s.

West Riding.—Reconstruction.—Also widening of Pigeon-bridge, and approaches thereto, which carry Rotherham and Pleasley main road over Pigeon Bridge brook, for C.C. West Riding Surveyor, County Hall, Wakefield. Dep. £1.

APRIL 21.

Thornhill.—Extensions.—Double silt tank and 2 additional filters and relative necessary works, for D.C. of Dumfries C.C. W. C. Easton, chartered civil engineer, 183, West George-st., Glasgow. Dep. £2 2s.

APRIL 22.

St. Albans.—Sewage.—Sewering Batford District, Wheathampstead, and small pumping station, for R.D.C. H. F. Mence, L.R.I.B.A., 43, Upper Lattimore-rd. Dep. £2 2s.

APRIL 23.

Dublin.—Steelwork.—355 tons steelwork for bridges, for Great Southern Railways. Deputy Chief Engineer, Westland-row Station, Dublin, C.S. Charge £1 1s.

Torpoint.—Beaches.—Landing beaches and reforming existing beaches, including formation of dams, steel sheet-piling, timber piling, concrete revetments and surface works at Torpoint, Cornwall, and Devonport, Plymouth, for Cornwall C.C. H. Victor Prigg, chartered civil engineer, South Devon-chambers, Millbay Station, Plymouth. Dep. £2 2s.

APRIL 30.

Cairo.—Tank.—Steel water tank on a steel framework tower for the water works at Tala (Menoufieh Province), for Ministry of Interior, Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 9221.)

MAY 5.

Winchcomb.—Water Supply.—8 miles of 4-in. and 3-in. water mains, also pumping station and reservoirs, together with other incidental works at Cleeve Hill, for R.D.C. Willcox & Raikes, engineers, 33, Great Charles-st., Birmingham. Dep. £5 5s.

NO DATE.

East Lothian.—Reservoir.—Impounding reservoir and ancillary works in Hopes Valley, about five miles from Gifford, on L. & N.E. Rly., for Western District Water Board. G. Cruickshank, clerk, County-buildings, Haddington.

ROAD, SEWERAGE, AND WATER WORKS

APRIL 14.

Blaby.—Reconstruction.—In bituminous material of Anstey-Glenfield-Rathy-rd., for R.D.C. Geo. Grayling, Highway S.

Burnham-on-Sea.—Improvements.—Kerbing and paving footpaths in certain sts., for the U.D.C. Wm. H. Chowins, E. and S. Dep. £2 2s.

Kingston-upon-Hull.—Sewers. — Reinforced concrete street and sewer works in Beverley-rd. and Ring-rd., for T.C. T. Thomas, City E.

London.—Main.—Laying and jointing approx. 3,330 lin yds. of 8-in. cast-iron main, together with connections and contingent works, in Great West-rd., between the Board's pipe track and Syon-lane, for M.W.B. Chief Engineer, Offices of Board, 173, Rosebery-av., E.C.1. Dep. £10.

London.—Extensions.—Construction in concrete of 4,080 lin. ft. of open channel to carry flow of River Graveney from west side of Hermitage-bridge, Streatham High-rd., to end of existing aqueduct near Roe-bridge, Mitcham-lane, and other works in connection therewith, for L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Dep. £10.

Romford.—Extension.—472 yds. of 9 in. stoneware soil sewer and about 345 yds. of 9 in. surface water sewer with manholes, street gulleys, etc., in Corbets Tye-rd., Upminster, for R.D.C. S.

APRIL 15.

Buckhurst Hill.—Making-up.—Of Luctons-av., for U.D.C. Thos. J. Tee, clerk.

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Fulwood.—Making-up.—Of Highgate-av., Victoria-rd., Park-rd., Duchy-av., Manor-av., for U.D.C. S., 23, Garstang-rd. Dep. £5 5s.

Herne Bay.—Making-up.—Of Pier-av., between The Circus and Western-av., for U.D.C. B. J. Wormleighton, S.

Knaresborough.—Improvements.—Lay-out and improvement of Moat Field, for U.D.C. G. W. Boyes, clerk, York-place. Dep. £2.

Willesden.—Paving.—Asphalt paving works in certain roads, for U.D.C. F. Wilkinson, E. and S.

Southport.—Making-up.—Of Mill-rd., Ainsdale and Coudray-rd., for C.B. A. E. Jackson, B.E. Dep. £2 2s.

APRIL 16.

Birmingham.—Sewer.—Widening and reconstruction of Kingstanding-rd., Perry Barr, between College-rd. and King's-rd., length of about 3,000 yds., including foul and surface water sewers; widening and reconstruction of Stuart's-rd., Yardley, between Yardley Fields-rd. and Blakesley-rd., length of about 700 yds.; Widening, reconstruction and part diversion of Hogg's-lane and Merritte Brook-lane, Northfield, between Cock-lane and Elmdale-cres., length of about 1,175 yds., for T.C. Herbert H. Humphries, City E. and S. Dep. £2.

Cossley.—Sewerage.—3,600 yds. of sewer, 9-in. and 6-in. in dia. with manholes and other incidental works, for U.D.C. A. H. S. Waters, engineer, 25, Temple-rd., Birmingham. Dep. £3 3s.

London.—Laying.—For (*a*) Cavendish-grove, Jeffrey-rd., and Wilcox-rd. (part): supply and lay asphalt macadam 2 in. thick; and (*b*) Park-rd (part): supply and lay asphalt macadam 4 in. thick, for Lambeth B.C. Osmond Cattlin, B.E.

Newquay.—Levelling.—Also paving, metalling, kerbing, channelling, and other works in construction of The Crescent, for U.D.C. C. W. Walters, Council-chams. Dep. £3 3s.

Oxford.—Foundations.—Road foundations, sewers and surface water drains, on Cuttleslowe housing estate, for T.C. J. F. Richardson, City F. Dep. £2 2s.

Poole.—Sewerage.—24 miles of stoneware, concrete sewers and cast-iron, varying in diameter from 6 to 15 ins., and manholes, for R.D.C. Dodd & Watson, engineers, Wellington House, Bennett's Hill, Birmingham. Dep. £2.

Portrane.—Scheme for disposing of farmyard drainage at mental hospital, for Joint Committee of Grangegorman Mental Hospital. P. H. McCarthy, 26, Lower Leeson-st., Dublin. Dep. £1 1s.

Rickmansworth.—Sewerage.—At Claypit-lane and Sandy Lodge-way, for U.D.C. S. Dep. £2 2s.

Walsall.—Sewerage.—Laying and jointing of approx. 2,617 yds. of 9 in. and 138 yds. of 12 in. stoneware pipe sewers, the construction of manholes and all other necessary works relative thereto, at Streetly, for R.D.C. W. P. Young, E. and S. Dep. £2 2s.

APRIL 17.

Prestwich.—Extension.—Of Heywood-rd. to Glebelands-rd., for U.D.C. E. and S.

Watford.—Sewerage.—7,500 yds. stoneware pipe and concrete pipe soil and surface water sewers, varying size from 21 in. to 9 in. dia. (including 300 yds. in heading), and appurtenant works, for T.C. W. W. Newman, B.E. Dep. £5 5s.

APRIL 19.

Bodmin.—Pipes.—In various places for Bodmin Waterworks Co. N. Phillips, secretary, 2, Pleasant-view, Rhind-st.

Ebbw Vale.—Tarspraying.—About 5 to 6 miles of road, for U.D.C. P. I. Davies, S. Dep. £2.

Urmston.—Road.—Reconstruction and wideninng of Station-rd., for U.D.C. J. Heath, S. Dep. £2.

APRIL 21.

Ashford (Kent).—Reconstruction.—In reinforced concrete of parts of Station-rd. and Godinton-rd., also asphalt resurfacing part of Bank-st., for U.D.C. A. F. Webster, S., 5, North-st. Dep. £3 3s.

Cardiganshire.—Road.—Improvement and diversion of Newquay-Lanarth-rd., for C.C. Howard Humphreys & Sons, consulting engineers, 28, Victoria-st., Westminster, S.W.1. Dep. £5 5s.

NO DATE.

Dewsbury.—Repairing Calder Bank-rd. E. Fox & Sons, Ltd., Calder Bank Mills.

Public Appointments

APRIL 14.

Chichester. — (1) Temporary Architectural Assistant; (2) Male Shorthand Typist; required in C.A.'s Department. County Architect, North-street

APRIL 18.

***Worcester.**—Architectural Assistant required by the C.C. County Architect, 38, Foregate-street.

APRIL 22.

Barrow-in-Furness. — Building Inspector required by the Corporation. Town Clerk, Town Hall.

***Hitchin.**—Clerk of Works required by the U.D.C. Clerk to the Council, Old Town Hall.

APRIL 23.

***Birmingham.**—Two Architectural Draughtsmen required by the E.C. Chief Education Officer, Education Department, Margaret-st.

APRIL 24.

***Stafford.**—Architectural Assistant required by E.C. Director of Education, County Education Offices.

APRIL 25.

***Aldershot.**—Quantity Surveyor required by the E.C. The Clerk, 4, Station-rd.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians, B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education, M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E. Borough Architect, B.A.; Architect, A.

Altofts.—U.D.C. propose conveniences between Normanton and Lee Brig.

Bakewell.—Byrom & Noble, AA.R.I.B.A., 9, Victoria-st., Bury, architects for buildings at Holleway to be known as "Florence Nightingale" Memorial Hall.

Basingstoke.—Branch banking premises in Winchester-st. for National Provincial Bank, Ltd., 15, Bishopsgate, E.C.2.

Batley.—Plans prepared for alterations "White Hart" hotel for J. Hey & Co., Ltd., Northbrook Brewery, Bradford. Architect, Wm. Illingworth, Sunbridge-rd., Bradford. Tenders being invited.

Bexley.—U.D.C. instructed to prepare plans and invite alternative tenders for 50, 100 or 166 additional houses on Pickford-lane estate. Plans passed: 56 houses, Heathside-av., S. H. Alabaster; 3 houses, Dawson-rd., F. Lockett; lay-out, Pickford-lane, and 8 houses, E. J. Webb.

Birkenhead.—Estates Committee approved lay-out houses on land forming part of Orred estate, and authorised B.S. to proceed with plans and estimates.—E.C. approved amended plans for alterations at Temple-rd. school.—Markets Committee approved plans for weighing machine offices in Cleveland-st.

Birmingham.—T.C. is to erect community building, Kingston Hill recreation ground, at £4,500.

Blackburn.—B. of E. asked local committee to submit proposals for open-air school.

Blackpool.—C.B. approved elevation of proposed nursing home, Condor-grove, by G. Morris.—Tram shelters to be provided at Talbot-sq. and on Promenade, opposite Victoria-st.—Plans passed: 16 houses, Conway-av., R. & H. Fletcher; 84 houses and 4 houses and shops, Lyddesdale-av., R. & H. Fletcher; 4 houses, Pierston-av., G. Hodgson & Son, Ltd.; 7 houses, Mansfield-rd., J. Fielding & Sons; 4 houses, Rosebank-av., and 7 houses, Roseacre, A. Fletcher; 4 houses, Sunnybank-av., R. Brown & Son; rebuilding hotel, Corporation-st., Burtonwood Brewery Co.; additions and alterations, St. Bedes-av., A. Whalley, Ltd.; rebuilding hotel, Lytham-rd. and Waterloo-rd., Catterall & Swarbrick's Brewery, Ltd.; club premises, St. Annes-rd., St. Annes Road W.M. Club; memorial hall and Sunday school, Deans-st., Trustees of Holy Trinity Church.

Bolton.—Church Army Housing, Ltd., are proposing housing scheme. Stott & Son, architects, 8, Cross-st., Manchester, submitted two schemes for houses in Hulton-lane and Hawthorne-rd.

Bolton-upon-Dearne.—Elementary school by County Council to accommodate 1,200 children. Plans by H. Wormald, architect, County Hall, Wakefield. Tenders to be invited

Bournemouth.—T.C. approved:—Extensions, tower of Boscombe Congregational Church, Christchurch-rd., Boscombe, the Trustees; additions, premises, The Square, Richmond Chambers, Ltd.; 7 houses and garages (corner) Boscombe Cliff-rd. and Michelgrove-rd., C. V. Miller; shop premises, 16, Commercial-rd., Montague Burton, Ltd.; 8 houses, Newcombe-rd., Southbourne, S. Kermode.

Bradford.—T.C. to erect electricity transforming chamber, Nelson-st., at £7,800.

Chapel-en-le-Frith.—R.D.C. approved: lay-out plan, 20 houses and 1 shop, Hindlow, 10 houses, Cowdale, 10 houses, Upper End, Buxton Lime Firms Co., Ltd.

Cheadle (Ches.).—E.C. propose improvement Jonathan Robinson Endowed School and temporary school at Queen's-rd., Cheadle Hulme, at £970. Plans by F. A. Browne, F.R.I.B.A., 18, Newgate, Chester, C.A.

Cheltenham.—T.C. approved:—Bendall & Sons, 12 semi-detached houses on new road off Old Bath-rd.; Naunton Estates (Cheltenham), Ltd., 8 semi-detached houses with garages, Whaddon-rd.; Education Committee, alterations and additions to Naunton Park schools, Naunton-lane; Education Committee, alterations to Dunalley Street schools, Dunalley-st.; Managers of Leckhampton schools, additions to Leckhampton schools, Hall-rd.

Chesterfield.—B.S. to prepare plans for central swimming bath, Lordsmill-st. Plans of proposed slaughterhouse, near the cattle market, to cost £7,948 been approved.

Chorley.—T.C. approved:—F. W. Woolworth & Co., Ltd., premises, 52 and 54, Market-st.; T. & R. Smith, extensions to mineral water factory.

Clitheroe.—B.E. approved schools in Brownlow-st. for 560 scholars.

Coulsdon and Purley.—Council to obtain site for housing purposes.

Coulsdon and Purley.—U.D.C. approved:—F. Everitt, 2 pairs semi-detached houses and garages, Bradmore-way, Coulsdon; Grosvewells, Ltd., 25 detached houses and garages, Portnalls-rd., Coulsdon; E. C. Astington, 10 semi-detached houses, Tulverton-rd., Selsdon; Steel & Howes, 28 detached houses, Sylvan-close; 4 semi-detached houses, Selsdon-rd.; 5 detached houses, Addington-rd., Selsdon.

Crewe.—Members Cappenhall Parish Church to erect parochial hall.

Darfield.—Site to be acquired off Doncaster-rd. for senior school. Plans by M. Wormald, A.R.I.B.A., County Hall, Wakefield, C.A.

Darlington.—Application to be made by T.C. for £32,000 for extensions to public baths, £16,598 for extensions to Dodmire School, £15,000 for work in connection with the transfer of Corporation stoneyard to new site, £11,500 for public abattoir, £9,190 for alterations Grange school.

Dewsbury.—C.B. approved conveniences on Flat Iron site, at £6,500.

Doncaster.—T.C. approved:—6 houses, Sandbeck-rd., — Barker; 24 houses, William Nuttall Cottage Homes, Bennetthorpe, for W. Nuttall.

Downpatrick.—R.D.C. give notice of improvement scheme, estimated to cost £114,332.

Dublin.—Following plans for buildings and works of reconstruction been approved by H. T. O'Rourke, City Architect:—Dawson-st., alterations and additions, "Hibernian Hotel"; Eden-quay, alterations and additions, Corinthian Cinema; Thomond House, Rialto, six lock-up garages; Cork-st., Hospital, extensions; 20 Lower Camden-st., rebuilding, Daly Bros.

Dukinfield.—P. Howard, A.R.I.B.A., 88, Mosley-st., Manchester, preparing plans for alterations, Crescent-rd. Council School.

East Ham.—B.E. is to submit estimate for erection of Plashet sub-station.—Plans passed: 4 houses and workshop, Kennard-st., North Woolwich, W. Harris, Ltd.; shop and timber store, Nos. 772-4, Romford-rd., F. Amott, architect; mission hall, corner Flanders-rd. and Bonney Downs-rd., W. J. Cearns; alterations, 165, High-st. North, Hammond & Miles, Ltd.—Council received grant of £1,500 for widening East Ham railway bridge.—B.E. submitted £515 for redecorating work at Town Hall.

Earby.—Elementary Council school to accommodate 200 children by West Riding E.C.

Epsom.—Plans prepared for E. Best & Co., Ltd., 87, Old Lodge-lane, Purley, for six garages and number of houses in Garden-close, Banstead.

Eyemouth.—Berwickshire E.C. considering schools at Eyemouth and Chirnside, at £45,000.

Farnham.—U.D.C. approved: alterations and additions, Westminster Bank, T. P. Bennett & Sons.

Fleetwood.—Additional lavatory conveniences to be provided at "Strawberry Gardens Hotel" by Catterall & Swarbrick's Brewery, Ltd., Blackpool. Plans by B. Drummond, A.R.I.B.A., 54, Adelaide-st.

Flockton (Wakefield).—West Riding E.C. propose elementary council school to accommodate 280 children. Plans by H. Wormald, County Hall, Wakefield.

Folkestone.—T.C. approved, 4 houses, Stoddart-rd., S. H. Page; 7 cottages, Waterloo-rd., W. Davis.

Fowey.—T.C. passed plans by Housing and Parks Committee for bathing shelters at Readymoney.—Plans also approved for pavilion by Fowey Bowling Club on bowling green enclosure at Squire's Field.

Golborne.—Managers Church of England Schools to build junior church school to accommodate 300 children. (Rector, Rev. A. White, M.A.)

Goisar (Yorks).—Co-operative Society, Ltd., propose additions premises, James-st. Plans by Lunn & Kaye, architects, Milnsbridge, near Huddersfield.

Goole.—H. Wormald, architect, Education Dept., County Hall, Wakefield, prepared plans for elementary school, to accommodate 1,200 children.

Hendon.—U.D.C. approved: additions to headmaster's lodge, Mill Hill school, Mill Hill School Governors; additions Church House, The Ridgeway, Mill Hill, A. T. Steed; 3 houses, Sherwood-rd., Hendon, Haymills, Ltd.; 20 houses, Copthall-gardens, Bunns-lane, Mill Hill, H. Merrylees; additions to King Alfred School, North End-rd., Golders Green, Barry Parker; 36 houses, Oakmead-gardens and Northolme, Mill Hill, Hy. Boot & Sons; warehouse, rear 62, Watling-av., Burnt Oak, W. N. Wright; 10 shops, Lower Hale-lane, Mill Hill, Val Myer & Watson Hart; 8 houses, Highwoodgrove, Mill Hill, Cramb Bros.; milk bottling depot, Claremont-rd., Cricklewood, Express Dairy Co., Ltd.; instruction school, Rolls Royce works, Claremont-rd., Cricklewood, P. H. Currey; sports pavilion, Hall-lane, Watford-way, Hendon, W. J. Gomm.

Ilford.—Secondary Education Sub-Committee of Essex E.C. recommended new secondary school for boys and steps be taken for acquisition of site.

Ilfracombe.—U.D.C. given instructions for sewerage and road work in connection with new housing scheme, to be proceeded with. Sanction from M.H. to loan of £12,970 for houses also reported. M.H. wrote sanctioning borrowing £4,353 for conversion to public offices of west wing of Ilfracombe Hotel.

Kettering.—Gotch & Saunders, F.R.I.B.A., High-st., alterations premises, High-st., for Sports & Rubber Stores, Ltd.

Kettering.—Governors Hospital considering extensions.

Kingsbury.—Plans passed: 582 houses and new roads and sewers, Springfield estate, J. Laing & Sons, Ltd.; 117 houses, Oakhurst-pk. estate, H. Boot & Sons, Ltd.; 26 houses, Townsend-close, Wood-lane, H. Higinbotham; 56 houses, Kingsmere-pk. and Salmon-st., Salmon's Estates, Ltd.; 26 houses, Oakleigh-av., Boot & Sons, Ltd.

Kirkheaton (Yorks).—Kirkheaton Co-operative Society, Ltd., to make extensions to central premises, Fieldhead.

Leeds.—Appleyards, of Leeds, acquired site junction St. Peter's-st. and the New-st., upon which to erect new salerooms.—Site been acquired in York-rd. by Smith's Potato Crisps (1929), Ltd. for depot.—Electricity Dept. to invite tenders for electricity transformer station at Moor-rd., Headingley.

Leeds.—H. E. Gilbert, "Briarfield," Huby, architect for alterations and improvements to Weeton Parish Church.

Leicester.—Police station buildings at Aylestone to be converted into free public library for Corporation. A. T. Gooseman, B.S.

Liverpool.—T.C. passed: additions to 40-42, Gt. Homer-st., Kirk & Tomlinson, for West Riding Wallpaper Co.; open-air skating rink, corner of Green-lane and Tynwald-hill, F. G. Barker, for H. S. Lipson; 6 houses, Leyfield-rd., corner of Hampton Court-rd., West Derby, E. Russell-Taylor & Son, for J. Hall & Co.; licensed premises, "Heath Hotel," as addition to "Bankfield," corner of Greenhill-rd., opposite Heath-rd., Allerton, Rich, Owens & Son, for Greenall, Whitley & Co., Ltd., St. Helens; electric sub-station, Thingwall-lane, Corporation; hotel premises, Warbreck Moor, H. E. Davies & Son, for P. Walker & Son, Ltd.; 6 houses, Knockaid-rd., and 4 houses, Portrush-st., Tue Brook, Jas. S. Bramwell, for Thos. Percy, Ltd.; 6 houses, Leyfield-rd., Hampton Court-rd., E. Russell, Taylor & Sons, for John Hall & Son; alterations and additions to school premises, "Eddisbury Lodge," Almonds Green, West Derby; restoration of warehouse, 1,155, Vulcan-st., for Liverpool Warehousing Co., Ltd.; 32 houses with garages, Ingleholme-rd., and 32 houses with garages, Varley-rd., Brown & Sanders, for Evans & Howarth; 6 lock-up shops and public hall, Utting-av. East, for Corporation of Liverpool; 4 houses, Allangate-rd., Garston, Irving & Mosscrop, for R. Cleugh; alterations and additions to premises, Walter-st., E. Kirby & Sons, for Pelling, Stanley & Co., Ltd.; 10 houses with garages, Hollytree-rd., N. Griffith.

Liverpool.—Baths Committee propose public laundry and to reconstruct present public washhouse in Burroughs-gardens, and they have applied to M.H. for £33,500, which has been subject of inquiry.

London (Acton).—B.C. approved: Liquid Measurements, Ltd., Victoria-rd., N.W.10, extension to factory, Victoria-rd.; J. Atherton & Co., builders, 12, East Acton-lane, W.3, addition, 47, Gibbon-rd.; W. Atkinson, builder, 15, Balfour-rd., Acton, W.3, amended block and detail plan of houses, Wilfrid-gardens; North Acton Conveyor & Elevator Co., Ltd., Wales Farm-rd., Acton, W.3, metal store, Wales Farm-rd.; Douglas Smith & Barley, architects, 50, Queen Anne's-gate, S.W.1, amended lay-out portion section 1, also house details and drainage, Hanger Hill estate, Princes Boulevard; G. P. Pratt, architect, 174, High-st., Acton, W.3, alteration into flats, H. M. Hobson, Ltd., 57, The Vale; J. G. P. Meaden, architect, Temple-chambers, Temple-av., E.C.4, extension to Die Foundry, Lightalloys St. Leonards-rd.; J. Atherton & Co., builders, 12, East Acton-lane, Acton, W.3, additions, 22 and 24, Bowes-rd.; F. E. Simpkins, architect, Estate Office, Chase Estate, Park Royal, N.W.10, store, E. Saunders & Son, Ltd., Minerva-rd.; G. N. Watts, Ltd., builders, 147, High-st., Notting Hill-gate, W.11, garage and chauffeurs' quarters, S. G. Brown, Wales Farm-rd.; E. Wood & W. Mould, Albion Joinery Works, Old Oak Common-lane, N.W.10, extension to joinery works, Old Oak Common-lane.

London (Hackney).—B.C. approved: G. C. Wimbourne, 12 houses, Warwick-rd., and 5 houses, Knightland-rd.; En Tout Cas (Syston), Ltd., sports pavilion on tennis ground, rear 133 to 139, etc., Holmleigh-rd.; B. Howarth, weir-keeper's cottage adjoining Strong's bridge, South Millfields.

London (Lambeth).—B.C. approved: Morris-Singer Co., one-story addition upon site abutting upon Oval-place; Lansdowne Building Co., alterations and additions, 17, Lansdown-rd.; W. Wilmot, Ltd., garages, rear 14, 14a, and 14b, Lancaster-rd.

London (Lewisham).—B.C. approved: J. H. Bolton, 8 houses, Chudleigh-rd., and 3 houses, Ladywell-rd.; B. G. Utting, 32 houses, Perry-hill; Gledhill Bros., garages at rear 125, Sunderland-rd.; G. A. Clothier, 4 houses, Collingtree-rd.

London (Lewisham).—B.C. recommend plans of proposed office, cottage and cart sheds and widening of bridge at Wearside-rd. depot be approved, and B.S. be instructed to carry out work, at £1,150.

London (Smithfield).—City Corporation recommend painting and repair of Poultry, General and Annexe sections of London Central Markets, at £16,000.

London (Woolwich).—Plans passed.—Flood & Wright, 40, Archery-rd., Eltham, 6 houses, Shrewsbury-lane, Plumstead; B. T. Pudney, "The Castle Hotel," Eltham High-st., Eltham, S.E.9, 8 houses Larchwood-rd., Eltham; J. O. Cook & Son, 1a, Eleanor-rd., Woolwich, on behalf of A. Nuttall, one-story extension to rear shop, 11, Hare-st., Woolwich; F. A. Hampton, Highland-mansions, Blackheath, S.E.3, on behalf of Fretho, Ltd., two blocks of houses, Greenvale-rd., Eltham; W. J. Eaglen, 186, Burnt Ash-hill, Lee, S.E., on behalf of Eaglen Bros., 4 houses Gerda-rd., Eltham; Wright & Renny, 1 and 3, Powis-st., Woolwich, on behalf of T. P. Blower, 20 houses, Thornhill estate, Plumstead.—B.C. recommend application to M.H. for £1,900 for extension Eltham Library by addition of children's department.

*See also our List of Contracts, Competitions, etc

Longford.—U.D.C. to build 15 five-roomed and 35 three-roomed houses.

Loughborough.—The Trustees Frost's Charity proposing eight almshouses, York-rd. Plans by G. H. & A. M. Barrowcliffe, A.R.I.B.A., architects, Town Hall-chams.

Maidenhead.—T.C. approved Alterations and additions, King-st., Reading Co-operative Society; 2 pairs semi-detached bungalows, Ray Mill-rd., Cripps & Green.

Manchester.—Plans approved for rebuilding "The Red Lion Hotel," Wilmslow-rd., Withington.—E.C. propose public elementary school, Victoria-av., Blackley.—Sanction received for £20,531 for Mauldeth-rd. Municipal School.—Public Health Committee to erect sanitary conveniences at junction Alexandra-rd. and Greame-st., Moss Side, at £1,700. On site in Butler-st., Oldham-rd., at £2,690, and ladies' conveniences at Knott Mill, Deansgate, at £1,000. Plans prepared by H. Price, A.R.I.B.A., Town Hall.—T.C. received sanction to £5,300 for alterations Foxhill Farm, Chat Moss, for hotel facilities, for Airport Special Committee.—Libraries' Committee propose acquiring land adjoining East Gorton Library for extensions.

Manchester.—If plans of E.C. passed by Finance Committee and City Council, nearly £2,000,000 will be spent on building new schools.

Mansfield Woodhouse.—U.D.C. decided to apply to M.H. for £18,000 for building of 54 additional houses, Slant-lane estate.

Matlock.—M.H. held inquiry into application for power to borrow further £41,500 for sewerage work.

Mexborough.—Adwick-rd. Council school to be enlarged to accommodate additional 240 children.

Middlesbrough.—Sanction been obtained from Government Department for Corporation bus garage, at £4,000.

Middleton.—In connection with school re-organisation scheme, E.C. decided to invite P. Howard, A.R.I.B.A., architect, 88, Mosley-st., Manchester, and Bernard Widdows, architect, St. James'-chams., Derby, to submit schemes for two infant and junior schools in Alkrington area and other at Beershaw, Middleton.

Mitcham.—U.D.C. approved: H. Poulson, 6, Graham-rd., 18 lock-up motor sheds, Mitcham-pk.; Wates, Ltd., 668, High-rd., Streatham, S.W.16, 7 double tenement houses, Rowan-rd.; J. Sands, 40, London-rd., 80 houses, two streets and sewers between Miles-rd. and Glebe-av.; Wates, Ltd., 668, High-rd., Streatham, S.W.16, 20 houses, Grove-rd.; H. W. Bannan, 8, Philpot-lane, E.C.3, 32 houses, Rowan-rd.; S. Dale, 13, London-rd., Mitcham, 24 houses, off Lock's-lane; Hall, Beddall & Co., Ltd., church, Middle-rd.

Newbury.—D.C. approved; 4 houses, Leckhampstead.

Newcastle-on-Tyne.—G. & A. Modes, Ltd., 380, Oxford-st., W.1, to erect store on Singleton House site in Northumberland-st.

New Hunstanton.—M.H. inquiry into application of U.D.C. for sanction to borrow £19,700 for construction of sea wall, promenade, groynes, boating lake, etc., on South Beach.

Newton Abbot.—R.D.C. approved:—Totalisator at Newton Abbot Racecourse, for Racecourse Betting Control Board; lay-out at Maidencombe, for — Williams, for 12 houses; lay-out, Solomon's Post, Maidencombe, for J. Nickols, for 17 houses.

Norristhorpe.—Members P.M. Church (Rev. J. Brace Evans) raising funds for Sunday school.

Northampton.—C.B. recommend £35,000 for road reconstruction work.—Plans passed:—Extension to dining-room, new dormitory and w.c., etc., St. Saviour's Home, High-st., Kingsthorpe, Peterborough Diocesan Society; house and shop and 3 lock-up shops, Bridge-st., Cotton End, C. T. Vernon; motor house, rear 117, Ardington-rd., Northampton Co-operative Society, Ltd.; alterations and additions, 35, College-st., Northampton Religious and Useful Knowledge Society; 8 houses and 15 houses, Trinity-av. and Murray-av., Chowns, Ltd.; conversion of 4 shops into 1, new w.c.s, etc., 16-20, Gold-st., Montague Burton, Ltd.; extension of polish factory, Great Russell-st. and 115, Overstone-rd., C. E. Cook & Co.; 18 houses, Barry-rd., W. J. Richardson & Son; alterations, "The Vine" Inn, Abington-st., Campbell Praed & Co., Ltd.; alterations and additions, bottling dept., The Brewery, Bridge-st., Northampton Brewery Co., Ltd.

Nottingham.—City Estates Committee agreed to appropriation by E.C. of additional land forming part of Wollaton Park estate, for school.

Nuneaton.—It is proposed to build South Transept, Chapel, remainder of Nave and Tower, Abbey Church.

Nuneaton.—Miners' Welfare Committee agreed to pit-head baths at Haunchwood Collieries.

Nuneaton.—R. C. Moon, B.S., been instructed to prepare plans and estimates for fire-station and offices, Newtown-rd.

Peterborough.—E.C. recommended school at Helpston to accommodate 320 in lieu of proposed new schools at Barnack and Glinton.

Pontefract.—R.D.C. instructed Surveyor to prepare lay-out of land at Dark-lane, Glass Houghton, and Tenter-close, Ferrybridge, for houses.

Portsmouth.—T.C. approved:—A. Fairheads, for Handleys, Ltd., showrooms, Portland-rd.; W. J. Daniels, for H. Sotnick, 12 houses, Kenyon-rd.; J. Wedge, 4 houses, Kirby-rd.; Dye Bros., 8 houses, Amberley-rd.; Tanner Bros., 12 houses, Domum-rd.; Dye Bros., 9 garages, Torrington-rd.

Prestwich.—Lancs C.C. to apply for £14,100 for junior and infants' school at Thorndyke-walk. Plans by Stephen Wilkinson, F.R.I.B.A., 16, Ribblesdale-place, Preston, C.A.

Ramsbottom.—Funds being raised by members local St. John Ambulance Brigade for assembly hall.

Rawdon.—Extension of Baptist College, H. E. Illingsworth, A.R.I.B.A., 8, East-parade, Leeds.

Rawmarsh.—Improvements to be carried out to Congregational Church, including re-roofing building, at £500.

Ripley (Derbys).—Plans approved for Catholic Church for Rev. T. B. Farmer.

Rixton.—P.C. propose lavatory accommodation at cemetery.

Roshdale.—S. H. Morgan, Town Hall, to prepare plans for public abattoir.

Rotherham.—Saxon Shoe Co., Ltd., Kilmarnock, acquiring 5, Imperial-bldgs., from T.C. for enlargement branch at 6, Imperial-bldgs.—Vicar of Whiston to acquire site at Wickersley-rd., Herringthorpe, for church and vicarage.—Architects, F. A. Scott & Sons, been appointed to prepare designs for laboratories at new Technical College.

Rothwell (Yorks).—U.D.C. propose central clinic, at £2,500.

Royston.—West Riding E.C. to provide elementary school to accommodate 800 children, at £30,190.

Runcorn.—Cheshire County E.C. to erect elementary school on Stonehill's site, with accommodation for 1,020 children. Plans by County Architect, F. Anstead Browne, F.R.I.B.A., 18, Newgate, Chester.

Ryhope.—Plans for extensions St. Patrick's R.C. Church been submitted for approval.

Salford.—Health Committee accepted tender, subject to confirmation by Council, for 36 houses in Gerald-rd., Pendleton.

Scarborough.—G. H. Fawcett, A.R.I.B.A., 3, York-place, prepared plans for extensions public garage, for W. Rowntree & Sons, Ltd., at £4,500.

Sheffield.—Truswell's Brewery Co., Ltd., 51, Norfolk-st., proposing rebuilding of premises, Manchester-rd., to be known as "Crosspool Tavern." Plans by Flockton & Son, architects, 15, St. James'-row.

Sherburn-in-Elmet.—P.C. propose restoration scheme at Parish Church, at £500.

Shipley.—Gas Committee propose showrooms, Commercial-st., at £1,100.

Shiregreen.—Corporation propose to erect 1,000 houses by direct labour and 200 houses on Greenhill estate.

Sidcup.—London C.C. recommend £1,830 in respect of new fencing and provision of house telephones and fire-alarms at Queen's Hospital, and £36,000 for acquisition, etc.

Southgate.—R.D.C. approved: North Metropolitan Electric Co., to construct electric sub-station on land fronting proposed new road running parallel with Southgate-rd.

Southport.—Corporation propose market hall in Eastbank-st.

South Shields.—It is proposed to utilise existing secondary school premises for boys of Westoe Secondary School, erect new high school for boys at Harton. Plans been prepared for infants' and junior mixed school at St. Bede's R.C. School.

Spenborough.—J. Cooke, Sons & Co., Ltd., propose dye-house at works in South-st., off Bradford-rd.

Stoke-on-Trent.—B.E. to prepare plans for conversion old destructor works into garage.—Aerodrome site to be laid at Meir at £8,000. Land to be acquired off High-lane, Tunstall, for 150 additional houses.

Stratford.—U.D.C. received M.H. sanctions to borrowing £3,655, additions to Victoria-pk. Council school, and £880 practical room at Gorse Hill Council school.—Council resolved that Finance Committee be requested to include in estimates for forthcoming year sum to cover erection of additional 200 houses.—Plans passed: New hall, for St. Cuthbert's Church, Trafford-pk.; alterations, rear 724, Chester-rd., Cotton Storage Co., Ltd.; 10 houses, Milwain-rd., Archer & McAlpin; milk depot, Mildred and Lester-sts., Manchester and Salford Equitable Co-operative Society; alterations, warehouse, Third-av., Northern Motor Utilities, Ltd., and W. D. Horner & Co., Ltd.; offices and workshops, Chester-rd., C. W. Scrouther & Co.

Stroud.—R.D.C. to build 8 houses on land adjoining Hazelden Cottages.

Twickenham.—School Reorganisation Sub-Committee engaged J. R. Leathart & W. F. Granger, F.R.I.B.A., 7, John-st., Adelphi, W.C.2, as architects in connection with senior school on Jubilee Farm estate.

Uxbridge.—U.D.C. approved: Harefield-rd., Uxbridge, 8 houses, G. Neal; Mellow-lane, Hillingdon, 8 bungalows, F. H. Saville; Park-rd., Uxbridge, 16 houses, W. Rayner Smith; 11, High-st., Uxbridge, additions, E. G. Bayliss.

Wakefield.—J. P. Firth, A.R.I.B.A., architect, 4, King-st., has prepared plans for premises, Milnthorpe-lane.—Kay & Luman, AA.R.I.B.A., architects, 15, Wood-st., prepared plans for premises in Dewsbury-rd.

Wallasey.—£60,000 to be expended by Corporation on sewering low-lying area of Leasowe-rd. estate and Bidston, and in construction of roads and sewers in connection with 200 new houses being built in Reed's-lane. Further £19,400 being expended on extension Leasowe-rd. from Reed's-lane to Pasture-rd., Moreton.

Walsden.—J. E. Stott, 3, Bridge-st., Todmorden, architect for alterations and improvements at Walsden Wesleyan Chapel, for Wesleyan Authorities.

Whitby.—U.D.C. approved: R. A. Wilson & Sons, 4 houses, North-promenade.

Whitefield (Lancs).—U.D.C. to erect 200 additional houses in Besses o' th' Barns district.

Wistow.—W. A. Lea, L.R.I.B.A., 4, Market-hill, Huntingdon, estimates cost of repairs to Parish Church at £600.

NEW CINEMAS

Colne.—A plan was submitted to the T.C. by Messrs. Dennis & Co. for alterations and additions to existing premises in Barrowford-road proposed to be used as a public cinema, café and dance hall. It was resolved that the plan be referred for the consideration of the sub-committee, with full power to act.

Ealing.—A scheme has been promoted for the sale of the sites of Nos. 18 and 20, Uxbridge-road, W., by the owner, Mr. J. B. Gould, for commercial development. Among the schemes proposed are the erection of a cinema, a skating rink, or shops and garages.

Humberstone.—Messrs. Cecil Ogden & Co., architects, 4, Welford-place, Leicester, have prepared plans for the erection of a cinema and café at the corner of Scraptoft-lane and Uppingham-road for Mr. B. W. Cole, Scraptoft Hall, Leicester, to seat 2,000, and estimated to cost £50,000.

Lancashire.—The Managers of the Broadhead Circuit have decided to convert their buildings into "talkie" cinemas. The theatres which are to be converted are Queen's Park Hippodrome; Bury Hippodrome; Crown Theatre, Eccles; and Empire Hippodrome, Ashton. The cinemas which are to be converted are: Junction, Hulme; Empress, Manchester; Pavilion, Ashton; Palace, Preston; and Winter Gardens, Morecambe.

Mitcham.—Tenders are invited (returnable to the chairman, Majestic Theatre (Mitcham), Ltd., 151, Great Portland-street, W.1) for the construction of the proposed cinema at the junction of St. Mark's-road and Fair Green. The architect is Mr. S. B. Pritlove, 6, Sherwood-street, W.1. April 17 is the closing date.

Newbury, Berks.—The T.C. has sanctioned the proposals of Messrs. A. & N. Kendall, Ltd., to purchase the Kendrick House property for the purpose of erecting a cinema.

Smethwick.—A contract for alterations and improvements to the Princes Hall Cinema for Hewitson's, Ltd., has been awarded to Messrs. W. Jackson (Langley Green), Ltd., Birmingham. Mr. H. G. Bradley, 10a, Temple-row, Birmingham, is the architect.

Wisbech.—Mr. T. F. Parker, of 8, Old Market, Wisbech, who has prepared plans for extensions at the New Electric Theatre, has let the contract to Mr. F. W. Groom, Victoria-road, Wisbech.

SMOKELESS HEATING

In the course of a recent Chadwick public lecture on this subject, given at the Institution of Mechanical Engineers (Mr. W. E. Riley, F.R.I.B.A., in the chair), Dr. Margaret Fishenden said that much attention was being devoted to the possibilities of developing new processes for the production of improved types of solid smokeless fuel by means of carbonisation at low temperatures. Several large-scale installations were now running, and evidence as to their economic position should in due course become available. Low temperature coke, like gas coke, varied in quality with the nature of the coal from which it was made and the method of preparation, but both its physical and chemical properties favoured easy ignition, and if adequate supplies could be put on the market at a reasonable price the solution of the smoke problem would be greatly assisted. Great Britain's domestic coal consumption was, however, very heavy and showed no immediate signs of diminishing. Progress was, therefore, at the best, bound to be gradual, although by a suitable distribution of coke, gas and electricity, it might be accelerated.

Leeds Education Proposals.

The Leeds City Council has approved the local education authority's three-year programme for the reorganisation of schools in the city in connection with the raising of the school-leaving age. The proposals represent an ultimate expenditure of £1,000,000.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	
Second Hard Stocks	4 2 6
Per 1,000. Delivered at London Goods Stations.	3 18 6
Flettons, as	£ s. d.
King's Cross	2 12 3
Do., grooved for Flasher	
Do., Bullnose	2 14 3
	3 7 3

	£ s. d.
Best Blue	
Pressed Stocks	9 5 0
Do. Bullnose	9 15 0
Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 2 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretchers	21 0 0	D'bie Str'tch'rs	29 10 0
		D'bie Headers	36 10 0
		One Side and two Ends	30 10 0
Headers	30 10 0	Two Sides and one End	31 10 0
Quoins, Bullnose and 4½ in.		Splays, and Squints	2g 0 0
Plain	27 10 0		

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS
Delivered London

	s. d.		s. d.
2 in. per yd. super.	1 11	2 in per yd. super	2 9
2½ in. "	2 6	4 in. "	3 6

Thames Ballast	9	per yd
Fill Sand	12	" "
Thames Sand	12	" "
Best Washed Sand	12	" "

delivered 2 miles radius Paddington.

1 in. Shingle for Ferro-Concrete	11	" "
½ in.	11	" "
¼ in. Broken Brick	12	" "
Fan Breeze	11	" "

Per ton delivered in London area in full van loads.

Best Portland Cement, British. Standard Specification, Tust £2 6 0 to £2 8 0 per. alongside at Vauxhall in 50-ton lots.

Ferrocrete per ton extra on above	0 7 6
Ylirocrete " "	0 7 6
Super Cement ("Waterproof")	3 16 0
Roman Cement	5 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 15 0
Plaster, Coarse, Pink	3 10 0
" White	3 0 0
" Fine	3 12 6
Scraplte, Coarse	5 12 0
" Finish	3 9 0
Grey Stone Lime	3 17 0
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 10 9
Hair	1 17 6
Granite Chippings per cwt.	2 2 6

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 6d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at s. d.
Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE,—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. average, and ¼d. beyond 30 ft.

BOX-WOOD STONE.—
F.O.B. Quarries, Wirksworth, Derbyshire. s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides ..... " 22 6
Sawn three or four sides ..... " 27 6

YORK STONE, BLUE—*Robin Hood Quality*.
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 20 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... " 6 0
3 in. sawn two sides slabs (random sizes) " 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... " 1 6½
1½ in. to 2 in. ditto, ditto ..... " 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
4 in. rubbed two sides, ditto ..... " 6 1½
4 in. sawn two sides slabs (random sizes) " 2 1½
3 in. ditto ditto " 2 1½
2 in. self-faced random flags ..... Per yd. super 5 2 10

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 5s. 6d.; Moulded, 5s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£27 10	3 × 6	£21 0
4 × 9	22 0	3 × 11	25 0
4 × 8	25 0	2 × 11	28 0
4 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	24 0
2½ × 7	22 0	3 × 4	21 0
	21 0		21 0

1 × 11 ..... £30 0 | 1 × 9 ..... £28 0

PLAIN EDGE FLOORING

Inches.	per sq.
	19/-
	21/-
1	24/-

TONGUED AND GROOVED FLOORING

Inches.	per sq.
1	24/-
1½	30/-
1¾	34/-

BATTENS s. d.
1 × 2 ..... per 100 ft. 2 6

1" AND UP THICK.

Inches.	per sq.
1½	30/-
1½	34/-

MATCHING (BEST).

Inches.	per sq.
	16/6
	19/-
1	24/-

SAWN LATHS. s. d.
Per bundle 2 6

	£ s. d.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 16	0 to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14	0 to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10	0 to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15	0 to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16	0 to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1	0 to 1 10 0
Dry Teak, ft. cube	0 13	0 to 0 15 0
Dry American Whitewood, ft. cube	0 10	0 to 0 14 0
Best Scotch Glue, per cwt.	4 10	0 to —
Liquid Glue, per cwt.	4 7	0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons.

	Per 1,000. f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	£5 2 6
ditto hand-made ditto	5 7 6
Ornamental ditto	5 12 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
Hip and valley tiles (per dozen) { Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
" Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.
½ in.	12 0 0
⅜ in.	11 0 0

Diameter.	£ s. d.
⅝ in. to ¾ in.	10 15 0
1 in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes, Wrought Gen. Mild Iron Steel, Staffs.	Fittings. ½ in. and under. Iron.	Over ½ in. and ¾ in.	Flanges. ½ in. and under.	Over ¾ in.
	%	%	%	%	%
Gas	65	52½	45	47½	55 57½
Water	61½	48½	40	42½	50 52½
Steam	57½	45	35	37½	45 47½
Galv. gas	52½	40	35	37½	45 47½
Galv. water	47½	35	30	32½	40 42½
Galv. steam	42½	30	25	27½	35 37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

For yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
2 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	2½d.
	*O.G. GUTTERS.		3½d.
2 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/1½	2½d.
5 in.	1/3	1/2½	2½d.

*RAIN-WATER PIPES, &c.

For yd. in 6 ft. Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/2½	9½d. 1/2
2½ in. "	1/3	10½d. 1/2½
3 in. "	1/6½	1/1½ 1/6½
3½ in. "	1/11	1/4½ 1/11½
4 in. "	2/2½	1/7½ 2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

in. per yd. in 6 fts. plain	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2½ in.	2 5	1 9 2 1
3 in. "	2 9½	1 10½ 2 7
3½ in. "	3 0	2 1 3 1
4 in. "	3 3	2 7 3 7
	3 8	2 11 4 1½

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Bends, stock Branches, Pipe, angles, stock angles. s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6	4 6
4 in. " "	4 6	5 6
5 in. " "	5 5	7 0
6 in. " "	6 3	9 3
Gasken for jointing, 41/- per cwt.	7 2	11 6 15 0

IRON—	Per ton in London. £ s. d.	£ s. d.
Common bars	11 0 0	to 12 0 0
Staffordshire Crown Bars— Good merchant quality		
Staffordshire Marked Bars	11 10 0	to 12 10 0
Mild Steel Bars	14 0 0	— 15 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	— 11 0 0
Hoop iron, basis price	9 10 0	— 10 10 0
" Galvanised	11 10 0	— 12 10 0
Soft Steel Sheets, Black—	27 0 0	— 12 10 0
Ordinary sizes, to 20 g.	11 10 0	— 12 0 0
" " " 24 g.	12 0 0	— 14 0 0
" " " 26 g.	15 0 0	— 16 0 0
Sheets Flat Best Soft Steel, C.R. and C.A quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 0 0	— 16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 0 0	— 17 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 0 0	— 20 0 0
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	15 10 0	— 16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	16 0 0	— 17 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	19 0 0	— 20 0 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0	— 22 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	23 0 0	— 25 0 0
Best Soft Steel Sheets, 26 g.	24 10 0	— 25 10 0
Cut Nail, 3 in. to 6 in.	16 0 0	— 17 0 0
" *Under 3 in. (usual trade extras.)		

METAL WORK.—Standard sizes, suitable for complete house fronts including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)

	£ s. d.
LEAD—Sheet. English, 4 lb. and up	28 0 0
Pipe in coils	28 10 0
Soil pipe	28 10 0
Compo pipe	31 10 0

NOTE.—Country delivery, 20s. per ton extra; lots under 2 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt extra. Cut to size, 5s. cwt. extra.

	£ s. d.
Old lead, ex London area, at Mills per ton	£17 10 0

COPPER.

	per lb. s. d.
Seamless Copper tubes (basis)	1 3
Thin	" 1 0
Copper nails	" 1 1
Copper wire	" 1 11
PLUMBERS' BRASS WORK.	" 2 0

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 78/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.
½ in. ¾ in. 1 in.
39/6 50/- 116/6 per doz.

CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
" " 11/- 17/- 22/- 36/- 63/- per doz.

BRASS SCREWS.
1½ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 58/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.
1½ in. 1½ in. 2 in. 3 in.
8 lbs. P. traps 33/- 41/- 56/- 101/- per doz.
8 lbs. S. traps 35/- 45/- 66/- 126/-

TIN.—English Ingots, 2/3 per lb. SOLDER.—Plumber's 1/-. Tinmen's 1/2. Blowpipe 1/3 per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon	0 3 7	
" " in barrels	"	0 3 9	
Boiled " " in drums	"	0 3 11	
" " in barrels	"	0 3 11	
" " in drums	"	0 4 1	
Turpentine in barrels	"	0 4 1	
" in drums (10 gals)	"	0 4 0	
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		52 0 0	

Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

PAINTS, &c. (*contd.*)

		£	s.	d.
GENUINE WHITE LEAD PAINT. "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots per ton delivered		71	10	0
Red Lead, Dry (packages extra)	per ton	30	0	0
Best Linseed Oil Putty	per cwt.	0	15	6
Filicol	,,	0	16	6
Size. XD quality	fkn.	0	3	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths	2½d.	32 oz. fourths	6½d.
15 ,, thirds	3½d.	32 ,, thirds	9d.
21 ,, fourths	3½d.	Obscured Sheet, 15 oz.	3½d.
21 ,, thirds	4½d.	,, ,, 21 oz.	4½d.
26 ,, fourths	4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d
26 ,, thirds	6½d.	Em'lled, 15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	5d.
Tinned do.	7d.

Cast plate is same price as rough rolled.

"VITA" GLASS IN CRATES.	Per foot. s.	d.
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2	6

VARNISHES, &c.

		Per Gallon £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	6
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	0
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	6
Best Black Japan		0	10	6
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Cuirass Black Enamel		0	7	0

PATENTS

APPLICATIONS PUBLISHED.

299,854.—Dr. M. Platsch: Cement, concrete and gypsum.

325,040.—J. W. Evans: Windows and casements.

325,044.—E. Lorenz: Method of and devices for making concrete piles.

325,081.—T. Koidl, and F. Görlich: Method of and means for producing bricks of loam and clay.

325,093.—J. A. Formunt: Provision of substructures, particularly for subaqueous work.

325,128.—E. B. Openshaw: Dinner-wagons, dumb-waiters, and like articles of furniture.

325,156.—F. R. Green: Stand-pipes and hydrants.

325,175.—G. Henderson, and W. M. Henderson: Apparatus for laying tile drains.

Note.—Period for opposition expires April 10, 1930.

325,252.—J. W. Evans: Window-frames and windows.

325,211.—A. P. Wigglesworth: Method and apparatus for manufacturing cast pipes and caisson sections of cement or other plastic material.

301,077.—Rubber Latex Research Corporation: Plastics.

Note.—Period for opposition expires April 25, 1930.

NEW BUILDINGS IN SCOTLAND

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *office not later than Tuesday evening.*

Dundee.—BUILDINGS.—Plans and sections of the following proposed new buildings, etc., have been lodged at the Office of the City Engineer:—Broughty Ferry-road—houses for Messrs. Alex. Thomson & Co., Mr. Joseph Johnston, architect, 32, Bank-street; Camphill-road—alterations for Mr. A. G. A. Goudie, Messrs. Maclaren, Soutar & Salmond, architects, 15, South Tay-street; Glamis-road—additions and alterations for Mr. J. J. Barrie, Mr. James Findlay, architect, 33, Albert-square; High-street, Lochee—w.c. for Messrs. Alex. Neish & Sons, Messrs. Bruce, Son & Morton, architects, 10, Whitehall-street; Kinghorne-road—shops for the T.C.; Westbarn-road—houses for Mr. Robert Samson, Messrs. Thoms & Wilkie, architects, 21, South Tay-street.

Edinburgh.—EXTENSION.—The Edinburgh Dean of Guild Court has been granted warrant for an extension of Corstorphine public school at a cost of £10,500. At present there is accommodation for 480 pupils, and the additions will bring the school up to the 700 standard. There will be five new classrooms, science-room, sewing-room, cookery-room, and staff and cloakrooms.

Elgin.—An appeal has been issued for a fund of £1,000 to build and equip a public hall for the village of Bishopmill.

Lower Deeside.—DRAINAGE.—An important drainage scheme has been aproved by the Lower Deeside District Committee of the Kincardine County Council.

America's Contribution to Architecture.

Lecturing on this subject recently to the English-Speaking Union, Mr. Alfred Bossom, F.R.I.B.A., said that he considered that America's chief contribution to architecture was less in the skyscraper itself than in its scientific method of construction—every process rationalised, every grade of worker closely following each other without delays, using the materials as they arrived on the spot according to a carefully regulated plan prepared months ahead. He was opposed to skyscrapers for Britain on account of the difference in climatic conditions, but he thought that Britain, who in the past had never hesitated to teach the world all she knew, need feel no hesitation now in learning something from the newer nations. He pointed out that the British workman was as good as any in the world, and if he could see the prospect of continuous work would readily accelerate production if he were paid as well as his American brother, and if he were afforded the same kind of labour-saving devices.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'†
Aberdeen	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Airdrie	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayrshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Berwickshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/8	†1/2½
Broughty Ferry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Clackmannanshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Coatbridge	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbartonshire	1/7	1/8	1/7	1/7	1/7	1/7	1/7	1/2½
Dumfries	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dumfriesshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dundee	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Dunoon	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
East Lothian	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Edinburgh	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Forfarshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7	1/8	1/7	1/7	1/7	1/7	1/7	1/2½
Greenock	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Inverness	1/6	1/6	1/6	1/6½	1/6½	1/6	1/6	1/- to 1/2
Inverurie	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kincardineshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kinross-shire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanarkshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Mid Lothian	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Motherwell	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Peeblesshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Perth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Perthshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Peterhead	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Renfrewshire	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rothesay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Roxburghshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Andrews	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Selkirkshire	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stirling	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stornoway	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Lothian	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wishaw	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 735

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	2

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	"	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—

		s.	d.
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and ganged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors and partitions	" "	6	0
Do. trusses	" "	8	6

		½"	1"	1½"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		½"	1"	1½"	1½"
Deal edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	"	—	49/-	57/6	65/-
Do. matchings	"	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights : average size	" "	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roofwork	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	44	0
Do. Do. in flats	"	43	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	2
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead jointa	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add saw lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	" "	1	0
Obscured sheet	" "	1	1
¼-in. rolled plate	" "	0	9
¾-in. rough rolled or cast plate	" "	0	10½
¼-in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

New Tay Road Bridge.

A high-level road bridge over the Tay, to cost £2,900,000 has been tacitly approved of by Dundee Harbour Trustees. The bridge would have a clearance of 77 ft. above high water or spring tides. An alternative bridge would have a clearance of 15 ft. and would cost £1,050,000.

Trade Opportunity Abroad.

His Majesty's Trade Commissioner at Johannesburg reports that the city of Johannesburg is calling for tenders, to be presented in South Africa by May 1, 1930, for the supply of 250 35 ft. and 1,000 30 ft. steel lighting poles complete with cap finials, etc. Alternative tenders for approved concrete poles will be considered. (Contract No. 368.) Firms desirous of offering poles of British manufacture can obtain further particulars of this call for tenders upon application to the Department of Overseas Trade, 35, Old Queen-street, London, S.W.1. (Reference No. A.X. 9390.)

"Patents and Trade Marks."

Under this title a useful little handbook has been issued by King's Patent Agency, Ltd., of 146A, Queen Victoria-street, E.C.4. Mr. Benjamin T. King, the author, has had 44 years' professional practice in this specialised work, and his handbook is full of useful information on the subjects of design and copyright. A copy will be sent free of charge upon application.

New Motor Showrooms.

In the presence of a large gathering, Sir Percival Perry, K.B.E., declared open on Wednesday, April 2, the new showrooms and offices of the Ford Motor Co., Ltd., at 88, Regent-street, W.1. Prior to the opening of the new building, lunch was provided at the Café Royal, W. Sir Percival Perry, in welcoming the guests paid a special tribute to the architects, Messrs. Charles Heathcote & Son, and the builders, the Western Construction Co., together with the various subcontractors. Mr. C. H. Heathcote replied, and then presented Sir Percival with a gold key with which to open the new premises.

A New Oven.

We have just received from the National Radiator Co., Ltd., of Hull and London, particulars of the Ideal "Cookanheat." Nos. 20 and 21, which are just being placed on the market. They embody several new features, including an insulated jacket on the oven side and back, a lifting grate and the option of an open or closed fire. The external surfaces are finished with heat-resisting black paint, with the edges of the top plate, etc., nickel-plated. The Nos. 20 and 21 take the place of the former Nos. 01 and 1 respectively, but at present no change is being made in regard to the No. 2 Ideal "Cookanheat." A folder giving all particulars may be obtained from the company.

BUILDING FIRM'S JUBILEE.

Amongst the 160 present on Tuesday, April 8, at the Savoy Hotel, to celebrate the 50th anniversary of the business of Messrs. F. and H. F. Higgs, Ltd., of Herne-hill, S.E.24, were Mr. B. C. Aldous, chairman, Mrs. B. C. Aldous, Messrs. Oswald P. Milne, W. E. Watson, J. M. Theobald, Maxwell Ayrton, Ernest J. Brown, J. Murrey, H. Fagg, L. Martin, W. Begg Simpson, Percy Gleed, F. T. Dear, C. H. Riley, D. P. Middlemiss, H. F. Webb (secretary), E. A. Stone, H. F. Murrell, J. H. Pearson, J. M. Sheppard, G. Mackenzie Trench, A. H. Bird, J. Winter, and Major R. J. Holliday.

The Chairman, Mr. B. C. Aldous, after proposing the loyal toast, called upon Major R. J. Holliday, F.I.O.B., who submitted the toast of Messrs. F. and H. F. Higgs, Ltd. He referred to the many good friends he had in the firm and the good work the firm had carried out. Major Holliday then gave a descriptive account of the progress of the firm from 1880.

The Chairman, replying, paid special tribute to the memory of his late uncle, Mr. Fred Higgs, and Mr. George Aldous. He said he was sure that the success of the firm was due to team work and co-operation of capital and labour which was as essential to the country as to a business. Continuing the Chairman paid tribute to the building trades operatives.

Mr. H. F. Webb, in giving the toast of the "Guests," said he welcomed the guests specially on an occasion of this kind. He also mentioned the late Mr. H. F. Higgs and Mr. G. Aldous. He said he had been associated with the firm for over 22 years, and had seen many ups and downs. But he was pleased to say he had seen more ups than downs. They were, he said, pleased to see so many architects, surveyors, and friends whose business in life was linked with theirs.

Mr. John M. Theobald, F.S.I., who responded to the toast on behalf of the architects and surveyors, said he had watched the firm come through very trying times, and he was sure everybody congratulated them on their 50th anniversary.

Mr. J. Murrey, secretary of the Building Trades' Operatives, also congratulated the firm.

The Chairman, in conclusion, said that every operative employed would, in celebration of the firm's jubilee, receive 10s. An excellent musical programme was provided during the evening.

LONDON ASSOCIATION OF MASTER DECORATORS

The 21st annual report of this Association, which is affiliated to the National Federation of Master Painters and Decorators of England and Wales, now published, contains various facts of interest. Once again educational work increased. For the 1929 competition, organised by the National Painters' and Decorators' Joint Education Committee, 12 technical schools in the London area entered over 200 of their students, who received a record number of awards, including the Silver Medal of the Painter-Stainers' Company. Very few members availed themselves of the ruling of the National Committee, whereby the clause contained in the indenture form relating to day-time attendance of apprentices at a technical school could be deleted at the option of the employer. The hope is expressed that members will seriously consider the taking of apprentices into their employ, since it is felt that that is the only way to ensure the replacement of the old school of fully-trained operatives. A list is given of the boys who were available for and anxious to become apprentices to painting and decorating. The question of embossing comparatively poor quality wallpapers has been considered, and the matter has been submitted to the Materials Committee of the National Federation, with a recommendation that only papers which will resist the process of pasting and hanging should be embossed.

The Schedule of Charges for Daywork, issued in 1925, is, by reason of reductions in wages, and alterations and additions to the working rules, of little practical use under present-day conditions, and steps have been taken to secure its revision. By the inclusion of all items which are likely to be required in connection with the trade in London, it is hoped to make the new schedule of greater assistance to members than the old one has been. In April last the Executive of the National Federation issued a circular and questionnaire, which stated that it had been decided to overhaul completely the machinery of the Federation to see how and where it could be improved and developed. The Executive and Council gave serious consideration to the circular and questionnaire, and decided to forward a number of recommendations for the consideration of the National Executive. The National Federation Conference, 1930, will be held in London.

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office.*

***** Owing to the Easter Holidays next week, we publish on April 17. The last day for receiving Editorial copy is Tuesday morning, April 15.**

Aberdeen.—Shelter and conveniences at Sea Beach, for the T.C. Mr. Thos. F. Henderson, Burgh surveyor:—

Mason and brick works—
*W. J. Anderson, 140, Gray-street £2,012 7
Carpenter and joiner works—
*W. Grant, 11-12, Balmoral-terrace 203 10
Concrete and plaster works—
*James Scott & Son, Aberdeen Ltd., 483-485, Union-street 288 0
Plumber work—
*Forbes Gordon, 23, Diamond-street 715 10
Tile work—
*Robert Brown & Son, Fergusliehill works, Paisley 425 1
(All of Aberdeen.)

Aberfeldy.—Housing scheme, for the T.C. Mr. George Anderson, architect, Aberfeldy:—

Excavator, mason and brick works—*Stewart & Robertson, Aberfeldy.
Carpenter, joiner, ironmonger and glazier works—*R. Gow, Bridge of Tilt, Blair Atholl.
Slater and roughcast works—*Dow & Shearer, Perth.
Plumber and gasfitter works—*A. & J. Menzies, Aberfeldy.
Plaster and cement works—*Sellar & Co., John-street, Aberdeen.
Painter work—*G. Dalgleish & Son, Taybridge-road, Aberfeldy.

Altrincham.—14 type "B" houses on the Oldfield Brow housing estate, for the U.D.C. Mr. H. E. Brown, surveyor:—

*J. Dolan & Son, Ltd., Warrington... £7,050

Ashington.—New mining institution, for the Northumberland E.C., and the Central Miners' Welfare Committee:—

†J. J. Robson, Back Park-road, Blyth

Bexley.—36 houses in Victoria-road, Bexley, for the U.D.C.:—

*A. E. Guest, Ltd., Hornsey £12,498

Birmingham.—For the erection of Stechford Municipal Bank, with shop and living accommodation, for the Corporation:—

Charles Twigg	£4,850
Geo. Webb & Son, Ltd.	4,687
John Dallow & Sons	4,655
S. F. Swift & Sons, Ltd.	4,572
T. Elvins & Sons	4,570
Jones & Spencer, Ltd.	4,500
Arthur Hemming & Sons, Ltd.	4,496
George Mobbs	4,474
E. G. Brown & Sons	4,467
W. & J. Webb	4,376
Joseph I. Fitter	4,368
Maddocks & Walford	4,308
A. Pearce & Son	4,300
*C. Bryant & Son	4,286
Wm. Bishop	4,277
F. H. Smith	4,265
Morriss Jacombs & Sons	4,100

Birmingham.—Additions to the central garage in Digbeth, for the Midland "Red" Bus Co. Mr. A. Ashton, F.R.I.B.A., architect, 33, The Parade, Leamington Spa:—

*C. Bryant & Son, 65, Whitmore-road, Small Heath, Birmingham.

Birmingham.—Additions to the motor showroom premises at Colmore Depot, Hurst-street, Mr. McKie, architect, Wilde-green, Sutton Coldfield:—

*G. Mobbs, 391, Coventry-rd., Small Heath, Birmingham.

Blackpool.—Conveniences at Harrowside, for the C.B.:—

*Pickover & Sykes.

Blackpool.—Alterations to verandah, Ward Pavilion, Block No. 1, at the Sanatorium, for the C.B.:—

*H. Vickers & Son.

Bolton.—Sub-station at Doffcocker, for the Electricity Committee:—

*W. Gornall & Sons, Ltd., Bolton.

Bracknell.—New club, for the Bracknell British Legion Club, Ltd.:—

W. Denton, Wokingham	£6,500 0
A. T. Lloyd & Son, Crowthorne...	6,247 0
E. Brown, Bracknell	5,866 16
Lowe Bros., Knowl Hill	5,850 10
A. Brown & Sons, Nettlebed	5,756 18
Cox & Sons, Maidenhead	5,647 0
E. C. Hughes, Wokingham	5,538 0
Francis Bros., Tilehurst	5,530 0
Carter & Wilks, Slough	5,500 0
Norr s & Co., Sunningdale	5,492 0
Waldon & Co., Swallowfield	5,483 0
McCarthy E. Fitt, Reading	5,429 9

Bradford.—Alterations and additions to the "Woolpack Inn," White Abbey-road, for Messrs. J. Hey & Co., Ltd. Mr. Wm. Illingworth, architect—
*M. Booth & Son.

Bradford. — Sunday school adjacent to the Wesleyan Chapel, Long-street, Dudley Hill, for the Trustees. Messrs. W. J. Morley & Son, architects:—
*M. Booth & Son.

Bray.—Repairs to the hot sea baths, for the U.D.C.:—
*J. Moore, Dublin £1,028

Brentford.—Installation of low-pressure hot-water heating apparatus at the new Central School, Boston-road, Brentford, for the Brentford and Chiswick U.D.C. Mr. E. Willis, surveyor:—
*Britton, White & Co., 102, Victoria-street, S.W.1.

Bristol.—Convenience at St. Matthias-park, for the T.C. Mr. L. S. McKenzie, City Engineer and Surveyor, 65, Queen-square:—
Six houses at Greigsecullen—
E. A. W. Poole & Sons £2,321
R. Wilkins & Sons, Ltd., ... 2,187
Frank Wilkins 2,168
E. G. Padfield, Sons & Co., Ltd., Shepton Mallet 2,115
Bray & Slaughter 2,107
C. A. Hayes & Sons 2,079
W. A. Jones, Llantwit Major 2,005
*H. C. Wakefield & Sons, Clifton-road 1,878
(Remainder of Bristol.)

Bromsgrove.—War Memorial Chapel at Bromsgrove school:—
*J. & A. Braziers, Ltd., Bromsgrove.

Carlow.—40 houses, for the U.D.C.:—
Six houses, Greigsecullen—
*Lalor & Houlihan, Baldroan £1,788
Eight houses, Staplestown-road—
*Lalor & Houlihan, Baldroan 2,600
Six houses, Greigsecullen—
*Murphy Bros., Royal Oak, Bagnalstown 2,136
Thirty-four houses, Staplestown-road—
*Murphy Bros., Royal Oak, Bagnalstown 11,675
Six houses at Greigsecullen—
*J. Butler, Belan 2,780
Thirty-four houses, Staplestown-road—
Carbery, Athy 12,196
Six houses at Greigsecullen—
*—. Thompson, Carlow 2,248
Thirty-four houses, Staplestown-road—
*—. Thompson, Carlow 11,640
Thirty-four houses, Staplestown-road—
Borough Surveyor 10,790
Six houses at Greigsecullen—
Borough Surveyor 1,806

Chapel-en-le-Frith.—Houses, for the R.D.C.:—
Chapel-en-le-Frith, four houses—
†Mason & Hadfield, Ltd. £1,836
Four houses—
†Mason & Hadfield, Ltd. 1,821
Bugsworth, three houses—
†J. W. Swindells, Ltd. 1,418
Two houses—
†J. W. Swindells, Ltd. 916
Fernilee, two houses—
†S. Drinkwater & Son 856
Three houses—
†Briggs & Co. 1,410
Three houses—
†Briggs & Co. 1,410

Chelmsford.—Enlargement of the School of Science and Art, for the Essex E.C.:—
‡T. J. Bailey £25,055

Clonakilty.—Four houses at Clonakilty, Co. Cork, for the Irish Sailors' and Soldiers' Land Trust. Mr. W. J. Brown, F.R.I.B.A., architect, 50, Upper Mount-street, Dublin:—
*P. Walsh, Western-road, Clonakilty £2,386 16 10

Cromer.—Six pairs of houses in Connaught-road, Suffield-park, for the U.D.C. Mr. R. W. Fetherstone, F.F.A.S., architect, St. Peter's-road, Sheringham:—
W. Mace & Son, North Walsham ... £5,690
R. W. Anderson, Sheringham 5,068
J. W. Palmer, Aylsham 4,980
Girling & Smith, Cromer 4,975
A. & R. Leake, Cromer 4,800
T. & W. Pegg, Sheringham 4,692
Blyth & Son, Sheringham 4,687
Childs & Spinks, Cromer 4,600
G. Woodman, Cromer 4,598
*A. G. Brown, Woodhurst, Waterlane, West Runton 4,344

Darlington.—Additions to the Parish Church, for the Parochial Church Council and Wardens. Mr. R. Wylie, A.R.I.B.A., Diocesan Surveyor, 24, Granger-street West, Newcastle-on-Tyne:—
*Charge Bros., Gainford, Darlington.

Daventry.—8 non-parlour type houses at Byfield, for the R.D.C.:—
*Bosworth & Wakeford, Daventry £2,718

Dublin.—Taking down the parapet and rebuilding the front wall of Thomas Street Fire Station, for the City Commissioners:—
*E. Power £546

Dundalk.—Additions to the Court House, for the Louth C.C. Mr. Thomas Walsh, architect, County Surveyor's Office, Court House, Dundalk. Quantities by Mr. A. Edward Smith, F.S.I., 16, Upper Merrion-street, Dublin:—
T. Wynne & Co., Dundalk.
Jas. McAdorey & Sons, Dundalk.
J. M'Guinness, Dundalk.
T. McDonald & Sons, Ltd., Dundalk.
T. W. Stewart & Co., Ltd., Dublin.
G. W. Scott & Co., Dublin.
J. Beckett, Ltd., Dublin.

Eccles.—Electricity showrooms and offices at the corner of Church-street and King-street, Eccles, for the T.C. Mr. J. Knight, F.R.I.B.A., architect, 5, Cross-street, Manchester:—
*Russell Building & Contracting Co., Ltd., Manchester.

Edgware.—Rebuilding the "Railway Hotel," Station-road, for Messrs. Truman, Hanbury, Buxton & Co., Ltd. Mr. A. E. Sewell, L.R.I.B.A., company's architect, 91, Brick-lane, E.1. Quantities by Messrs. Burton & Gatward, 12, New-court, Carey-street, W.C.2:—
Holland & Hannen and Cubitts, Ltd. £29,692
W. Downe 28,560
H. & F. Higgs 27,476
A. Monk 27,468
Harris & Wardrop 27,410
Walter Lawrence 26,943
Henry Knight 26,852
Holliday & Greenwood 26,718
H. V. Clogg 26,177
Higgs & Hill 26,160
Douglass Halse 26,030
—. Dickins 25,481
*—. Brown, Watford 24,966

Edinburgh.—Installation of electric lighting in 156 dwelling houses at Niddrie Mains, for the T.C.:—
*A. J. Shand & Co., Edinburgh £846 19

Enfield.—Rebuilding "The Goat" public-house, Forty-hill, for Messrs. Truman, Hanbury, Buxton & Co., Ltd. Mr. A. E. Sewell, L.R.I.B.A., company's architect, 91, Brick-lane, E.1. Quantities by Messrs. Burton & Gatward, 12, New-court, Carey-street, W.C.2:—
Snewin Bros. £17,566
Guin & Son 16,839
Henry Knight & Son 16,751
Harris & Wardrop 16,681
—. Barker 16,675
H. V. Clogg 16,399
—. Favihead 15,863
*Douglass Halse 15,749

Erith.—Steelwork for new buildings for the British Fibrocement, Ltd.:—
*Royce, Ltd., Manchester.

Fleetwood.—Branch bank premises at the corner of Lord-street and Styan-street, for the Westminster Bank, Ltd., Lothbury, London, E.C.3. Mr. T. G. Lumb, F.R.I.B.A., architect, 19, Clifton-street, Blackpool:—
*Sir Lindsay Parkinson & Co., Ltd., Blackpool.

Friern Barnet.—Repairs at 43, 44, 45 and 46, The Avenue, for the U.D.C. Mr. A. G. Harman, Sanitary Inspector:—
R. Houghton & Son, Wood Green £293 6 0
Fiesher Bros., Highgate 288 3 3
F. S. Bevan & Co., Harrow 270 4 0
F. C. Stockman, Finchley 262 13 8
A. Cochrane, Stroud Green 254 18 0
J. Exell & Son, London, W.1 ..... 249 10 2
A. E. Brown, Ealing 212 8 0
Cliff Hainsworth, Bradford 208 1 0
A. E. Harris, Tottenham 206 5 10
W. J. Fox, Clapton 185 4 3
*A. J. Wallis, Ealing 125 12 3
Sanitary Inspector's estimate 229 9 6

Gloucester.—New hostel in Horton-road, for the E.C. Mr. R. S. Phillips, F.R.I.B.A., County Education Architect, Shire Hall:—
W. Drew, Cheltenham £32,648
Estcourt & Sons, Gloucester 29,736
J. Long & Sons, Ltd., Bath 29,260
Billings & Sons, Ltd., Cheltenham ... 28,800
H. J. Walker, Bream 28,600
W. Bowers & Co., Hereford 28,342
Collins & Godfrey, Tewkesbury 27,987
Hinkins & Frewen, Ltd., Oxford 26,917
W. T. Nicholls, Ltd., Gloucester ... 25,840
Knox & Wells, Ltd., Cardiff 25,427
Building & Public Works Construction Co., Ltd., Swindon 24,958
W. J. B. Halls, Ltd., Gloucester ... 24,900
*John Simmonds 22,743

Golborne.—54 houses on the Edge Green-lane housing site, for the U.D.C. Surveyor:—
*J. A. Massie & Son, Ashton-on-Mersey.

Grange-over-Sands.—Water works in the parishes of Cartmen Fel and Upper Allithwaite, for the R.D.C. Mr. T. Huddleston, engineer and surveyor:—
Supply of pipes, etc.—
*Asbestos Cement Building Products, Ltd., 29, Peter-street, Manchester £915 8 6
Excavation and refilling trenches, etc.—
*B. Birch & Sons, Lindale-in-Cartmel, Grange-o-Sands 704 7 2
Rainey Brothers, Ltd., Ironworks-road, Barrow-in-Furness 966 7 3
(Subject to approval of M.H.)

Greystones.—Sanitary conveniences, for the Wicklow County Board of Health:—
*T. Archer & Sons £300

Harrogate.—Wesleyan church at Kettlesing, for the Wesleyan Authorities. Mr. J. Ward Knowles, architect, Model Press-buildings, Bull Bridge, Accrington:—
*W. Barker, Hampsthwaite, Harrogate £2,500

Hillmorton Paddox.—Schoolroom and two vestries forming first portion of the scheme for a Wesleyan Church. Mr. C. J. Newman, architect, Rugby:—
*Foster & Dickson, Rugby.

Hounslow.—Elementary school for 800 places at The Leets, for the Heston and Isleworth E.C. Mr. J. G. Carey, Architect for the Education Committee. Quantities by Mr. John McBain, 21, Hart-street, W.C.:—
W. J. Drinkwater & Sons, Feltham £50,200 0
Corolite Con., Ltd. 46,966 0
Thos. Hiscock, Ltd., Hounslow ... 46,313 0
Wm. Daley & Co., Ltd. 45,100 0
Perrys (Ealing), Ltd. 44,974 0
Fassnidge & Son, Ltd., Uxbridge 44,537 0
J. Sheehan & Co. 44,000 0
Turner & Payne 43,744 19
Allied Building Corpn. 43,560 0
Roberts & Co., Ltd. 43,250 0
T. J. Lovell & Son, Beaconsfield 42,867 0
W. Lacey, Hounslow 42,821 0
Unit Construction Co., Ltd. 42,692 6
Public Works & Con. Co., Ltd., Swindon 41,499 0
*W. J. Harris, Elms Estate, Bath-road, Hounslow 40,603 13
(Remainder of London.)

Huddersfield.—Various trades required in alterations and additions to the Linthwaite Hall, for the W.M. Bowling Club. Mr. J. Ainley, architect and surveyor, 55, New-street:—
*Builders' work—*E. Pearson & Sons, Milnsbridge.
*Joiners' work—*Bamforth & Sons, Slaithwaite.
*Plumber's work—*G. Sykes, Meetham.
*Slater's work—*Wm. Smith, Milnsbridge.
*Plasterer's and painter's work—*G. Thorpe, Linthwaite.

Hull.—Wood fencing at Eastfield-road school site, for the E.C. Mr. R. C. Moore, Director of Education:—
*A. N. Taylor, Hull.

Ilkeston.—64 houses and construction of footpaths, drainage and fencing on the Northern Housing Estate, for the Corporation. Borough Engineer:—
*R. J. Jewell & Son, Nottingham.
(Subject to approval.)

Ilkeston.—Building special subjects rooms in connection with Bennerley school, for the E.C. Mr. H. Tatham Sudbury, F.R.I.B.A., architect, Rutland-chambers, Lord Haddon-road:—
*J. W. Stapleton & Sons, Ilkeston £3,739

Kirkby-in-Ashfield.—28 houses in Victoria-road, for the U.D.C. Mr. L. Dodsley, architect, Council Offices. Quantities by the architect:—
Per pair, parlour type, for five pairs—
*S. Johnson, Watnall-road, Hucknall ... £761
Per pair, non-parlour type, for five pairs—
*S. Johnson, Watnall-road, Hucknall ... 752
Per pair, non-parlour type, for four pairs—
*S. Johnson, Watnall-road, Hucknall ... 747

Leeds.—Houses and flats on York and Selby-road, Middleton, and Dewsbury-road housing estates, for the T.C. Mr. J. E. Acfield, City Engineer:—
York and Selby-road estate—
*P. Rhodes, Ltd., Cardigan-lane, Leeds £68,287
Middleton estate—
*F. Clough, Leeds-road, Tingley 44,611
Dewsbury-road estate—
*W. J. & R. Turnbull, Dewsbury-road, Leeds 39,358

Leeds.—Alterations and conversion of premises in Domestic-street into a cinema. Messrs. Fred Mitchell & Sons, architects, 9, Upper Fountaine-street, Albion-street. Quantities by the architects:—
*Brick and Joiner—*Wood Bros. (Leeds), Ltd., Commercial-road.
*Plumbers—*G. B. Vine, Ltd., Cobourg-street.
*Plasterers—*Ford Bros., Harehills.
*Painter—*Wm. Payne, Woodhouse.
*Heating—*Rosser & Russell, Ltd., Aire-street.
*Terra-cotta and sanitary goods—*Leeds Fireclay Co., Ltd., Wortley.
*Tiling and Terrazzo—*A. Andrews & Sons, Railway-street.
*Fire escape stairs, verandah, etc.—*Brookfield Art Metal Co., Great Wilson-street.

Leeds.—Shop premises at the junction of Merrion-street and Briggate, for Messrs. Phonophones, Ltd. Mr. P. Robinson, architect, Great George-street:—
*Main contract—*J. T. Wright & Sons.
*Asphalter—*Tunstalls Rock Asphalte Co., Ltd.

Leeds.—Extensions to premises in Lady-lane, for Messrs. Wharam, Ltd.:—
*H. Atkinson & Sons, Ltd.

Leeds.—Reconstruction of shop premises at junction of Vicar-lane and King Edward-street, for Messrs. Fifty Shilling Tailors, Ltd.:—
*Wm. Mason & Sons (Leeds), Ltd.

¶London.—The following contracts have been entered into by H.M.O.W. department during the week ended the 5th instant:—
Broadstairs Post Office—alterations and additions—W. W. Martin, Dane Park-road, Ramsgate.
Hythe Automatic Telephone Exchange—erection—J. B. Sharman, Ltd., West Cliff-road, Ramsgate.
Southend-on-Sea District—ordinary works and repairs—J. C. Flaxman & Sons, Ltd., 114, South-church-road, Southend-on-Sea.
Uxbridge Post Office and Telephone Exchange—alterations and additions—A. C. Dean, 213, West Wycombe-road, High Wycombe.
Purley Telephone Exchange—erection—Negus, Ltd., 1, Laurence Pountney-hill, E.C.4.
Pinner Telephone Exchange—erection—Industrial Constructions, Ltd., 54, Victoria-street, Westminster.
Chancery-lane Branch Post Office—alterations—Negus, Ltd., 1, Laurence Pountney-hill, E.C.4.
Bristol Central Telephone Exchange—wood block flooring—Hollis & Co., Ltd., Jameson-chambers, Hull.

London.—Erection of blocks 1, 2 and 3 of dwellings on the rear portion of the central section of Glebe estate North, Peckham-road, Camberwell, for the L.C.C.:—

	(i)	(ii)	*Excess of (ii) over (i)*
Leslie & Co., Ltd.	——	£71,437	——
Rice & Son, Ltd.	£69,870	70,093	£223
Higgs & Hill, Ltd.	68,368	68,865	497
George Parker & Sons, Ltd.	66,954	67,166	212
William Moss & Sons, Ltd.	66,275	66,500	225
Fred & T. Thorne	66,114	66,114	Nil
A. E. Symes, Ltd.	65,544	65,747	203
R. Woollaston & Co.	64,694	65,344	650
Canonbury Construction Co., Ltd.	63,783	64,483	700
C Miskin & Sons, Ltd., St. Albans	63,664	63,664	Nil
W. H. Gaze & Sons, Ltd.	63,383	63,497	114
Rowley Brothers (1929), Ltd.	63,214	63,854	640
The Unit Construction Co., Ltd.	62,992	63,535	543
J. E. Billings & Co., Ltd.	62,980	63,375	395
Gee, Walker & Slater, Ltd., St. James's-street, S.W.	*62,250	*62,250	Nil

Architect's comparable estimate, on basis indicated in item (i), £64,891.

(i) Materials being obtained from any source, except where otherwise provided.

(ii) The Portland cement, bricks for walling, tiles for paving, etc., timber for carpenters' work and joinery, steel, iron tubing for water supply and wastes, and glass being supplied wholly from and manufactured entirely within the British Empire; and the whole of the joinery (except stock pattern doors) being manufactured entirely within the British Empire.

(All of London.)

London.—Structural work in connection with the provision of a metalwork room at the Bermondsey Central boys' school, for the L.C.C.:—

W. S. Barton & Co.	£1,382
John Marsland & Sons, Ltd.	1,324
T. Brown & Son (Herne Hill), Ltd.	1,323
J. & C. Bowyer, Ltd	1,296
H. W. Spinks	1,289
Harry Groves & Son	1,257
Triggs & Co., Ltd.	1,248
Sims & Russell	1,246
W. J. Dixon & Sons	1,197
William Harbrow (1928), Ltd.	1,182
*H. & J. Taylor, Canada House, Hither Green-lane, S.E.13	1,136
Architect's estimate	1,226

(All of London.)

¶London.—The following works contracts have been placed by the War Office during the week ending April 3, 1930:—
Maidstone—artificers' work—H. Goodsell, Maidstone.
Stirling—alterations to married soldiers' quarters—J. Baxter & Sons, Dunfermline.
Fort George—repairs to parade ground—G. Duncan, Inverness.
Mill Hill and Barnet—artificers' work—W. R. Gray, Hounslow.
Catterick, Jaffa Lines—new road and fence—G. Dougill & Sons, Darlington.

London.—Restoration of the premises in Golden-lane, an isolation shelter and a residence for a sanitary inspector, and for the provision of a vaccination station, for the City Corporation:—

W. G. Beaumont & Son	£266
F. J. Howard	255
*T. Geo. Coote, Ltd.	238

London.—Alterations and additions to "The Victoria" beer-house, Pages-walk, Bermondsey, S.E., for Messrs. Truman, Hanbury, Buxton & Co., Ltd. Mr. A. E. Sewell, L.R.I.B.A., company's architect, 91, Brick-lane, E.1. Quantities by Mr. W. Gilbert, 74, Broad-street-avenue, E.C.2:—

Harris & Wardrop	£4,129
Snewin Bros.	4,045
Halse & Co.	4,024
G. Barker	3,847
Knight & Son	3,845
—. Schooley	3,793
*H. V. Clogg	3,787

Loughton.—Additions, repairs and renewals at the sewage disposal works, for the U.D.C. Mr. H. White, F.R.I.B.A., architect, High-road:—

W. & C. French, Buckhurst Hill	£1,785
*N. Buckley, Weymouth	1,385

Macclesfield.—84 working-class houses on Moss-lane housing site, for the T.C. Mr. E. Hamson, architect, Town Hall:—
†Middleton & Co. (Blackpool), Ltd., Blackpool.

Monaghan.—20 houses, for the U.D.C.:—
*McKenna, Armagh £6,038

Newbridge.—Reconstruction of Liffey bridge, for the Kildare C.C.:—
*Thompson, Carlow £2,800

Newbury.—Four houses at Weston, Welford, for the R.D.C. Mr. E. G. Hampshire, architect and surveyor, Wash Common:—
*F. C. Carter, Chaddleworth, Newbury £1,526

Normanton.—Painting and decorative work at the Council offices and fire station, for the U.D.C.:—
*R. L. Leake, Snydale-road, Normanton £136

Oldham.—Alterations to wards for the blind at the Institution for the Public Health Committee. Messrs. C. T. Taylor Roberts & Bowman, architects, 10, Clegg-street:—
Excavating, Draining and Brickwork—†T. Partington & Sons.
Masonry—†A. Mackay.
Carpenters and Joiners—†S. Ashton (Oldham), Ltd.
Slating—†J. Jackson.
Plumbing, Glazing and Painting—†W. Unsworth & Sons.
Plastering—†J. Glynn.

(All of Oldham.)

Padiham.—Extensions to the Churn Clough reservoir, etc., for the Corporation. Messrs. G. H. Hill & Sons, civil engineers, 40, Kennedy-street, Manchester:—
*S. Johnson (Mirfield), Ltd., Mirfield.
(£20,000 estimated cost.)

Plymouth.—Reconstruction of shop premises at 3 and 5, Union-street, for Messrs. Prices Tailors (Leeds), Ltd. Messrs. Kaye & Lunan, architects, Wood-street, Wakefield:—
*A. N. Coles & Son, Ltd.

Poole.—Tennis pavilion, Branksome-park, for the T.C. Mr. E. J. Goodacre, Borough Engineer:—
*J. H. Wilson & Son, Sandbanks-road, Parkstone £670

Preston.—39 houses and 16 flats on the Swansea-street rehousing site, for C.B. Borough Engineer and Surveyor:—
*Pius A. Baines & Son, Paley-road Sawmill, Preston.

Preston.—Vestries and lavatory accommodation at Christ Church, for the Parochial Church Council. Mr. Robert Martin, L.R.I.B.A., F.M.S.A., Diocesan Surveyor, 90, Deansgate, Manchester:—
*L. Fairclough, Ltd., Adlington, near Chorley.
Decorations—*S. B. Wilding & Sons, Preston.

Preston.—School medical clinic in Cuttle-street, for the Corporation:—
*J. Turner, Preston.

Rainham (Kent).—Construction of a wharf and incidental works at Motney Hill sewage disposal works, for the Rochester and Chatham Joint Sewage Board:—
*H. J. Wright, Strood, Rochester.

Saffron Walden.—12 pairs of houses, for the T.C. Mr. A. H. Forbes, Borough Surveyor, 5, Hill-street:—
Fourteen houses—
*A. H. Perry, Saffron Walden *per pair* £760
Four houses—
*J. Dix, Saffron Walden ..... *per pair* 742
Six houses—
*R. & P. Cope, Shelford, Cambridge *per pair* 772

Salford.—New boiler house at the Union Infirmary, Hope, Pendleton, Salford, for the B.G. Messrs. W. T. Gunson & Son, architects, 10, Marsden-street, Manchester:—
*W. Gornall & Sons, Ltd., Salford.

Sandbach.—New Vestry at St. Mary's Parish Church. Messrs. Austin & Paley, architects and surveyors, Castle-park, Lancaster:—
*Webster & Winstanley, Wigan £1,477

Sheffield.—Forty houses on the Longley estate (building scheme 18), sections XV and XXIII, for the T.C. Mr. W. Geo. Davies, F.R.I.B.A., City Architect:—
*W. Malthouse, Ltd., Rosedale-road, Sheffield £15,302

Shenley.—Provision of sewage treatment works at Porters-park, Shenley, Herts, for the Middlesex C.C., 1st April, 1930. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, Westminster, S.W.1. Mr. G. Bertram Kershaw, M.Inst. C.E., chartered civil engineer, 9, Victoria-st., Westminster, S.W.1:—

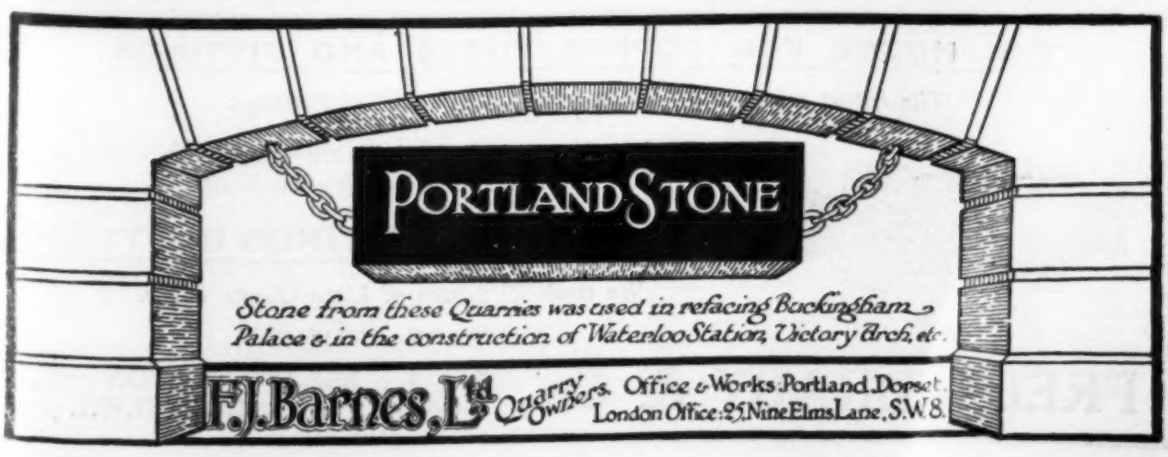
George Wimpey & Co., Ltd., London	£16,618 6 1
C. V. Buchan & Co., Ltd., Brighton	16,223 3 0
T. Plower & Co., Ltd., Bath	16,161 9 9
Howard Farrow, Ltd., Golders Green	15,088 7 7
W. & C. French, Buckhurst Hill	14,615 15 5
Marshall Hamer, Ltd., London	14,336 16 9
D. T. Jackson, Ltd., Barking	13,969 5 8
George Bell & Sons, Ltd., Tottenham	13,389 12 6
‡J. Laing & Son, Ltd., Mill Hill	12,978 0 8

Shepshed.—78 houses on the Cambridge-street site, for the U.D.C.:—
*T. Barker & Son, Loughborough... £23,435

Stamford.—Erection of 68 non-parlour houses on the New Cross-road site, for the T.C.:—
*J. R. Cooke, Ltd., Leicester £20,744

Stowmarket.—30 houses on the Brook House estate, Ipswich-road, for the U.D.C. Messrs. Hunt & Coates, L.R.I.B.A., 28, Ipswich-street:—
*F. Sharrow, Needham Market £13,690

Tiverton.—Houses, for the R.D.C.:—
Sixteen houses, Bradninch—
*Andrews & Miller £5,673 12 2
Eight houses, Cullompton—
*Andrews & Miller 2,706 1 4
Six houses, Thorverton—
*Andrews & Miller 2,904 12 3
Four houses, Sampford Peverell—
*Andrews & Miller 1,375 11 0
Two houses, Cadbury—
*Andrews & Miller 720 3 11
Two houses, Stoodleigh—
*Andrews & Miller 731 1 11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London Office: 25, Nine Elms Lane, S.W.8.

Wakefield.—Detached house at Minthorpe Green. Mr. J. Percy Firth, A.R.I.B.A., architect, 4, King-street:—
*Hepworth Bros.
*Slater.—*J. Tree.
*Plasterers.—*Newton & Barnes.
*Painters.—*G. Powell & Sons.
(All of Wakefield.)

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Warrington.—New Council school on the Bewsey estate, for the C.B. Messrs. Wright & Hamlyn, architects, Patten-chambers, Winmarleigh-street. Quantity surveyor, Mr. W. T. Davenport, Winmarleigh-street:—

*Frank Berry	£61,572 4 4

Welwyn.—New factory at the Garden City for the Norton Grinding Wheel Co., Ltd., Bush House, London, W.C.2:—

Excavations.—*Welwyn Builders, Ltd., Welwyn.

Wembley.—Rebuilding the "Norfolk Arms," Hanover-road, for Messrs. Truman, Hanbury, Buxton & Co., Ltd. Mr. A. E. Sewell, L.R.I.B.A., company's architect, 91, Brick-lane, E. Quantities by Messrs. Burton & Gatward, 12, New-court, Carey-street, W.C.2:—

—, Brown	£13,547
Godson & Sons	12,728
Snewin Bros.	12,674
—, Lawrence	12,606
—, Harris	12,424
—, Clogg	12,172
*Henry Knight	12,027
—, Dickins (withdrawn)	11,280

Wenlock.—Two pairs of parlour-type houses at Woodside, Coalbrookdale, and one block of four non-parlour type at Paradise, Coalbrookdale, for the T.C. Messrs. Riley & Son, architects, Central-chambers, Wellington:—

Broome & Poole, Wadeley	£3,753
Murray & England, Oakengates	3,412
Boucher Bros., Coventry	3,305
Thos. France, Wellington	3,300
Shrewsbury Building Co., Shrewsbury	3,248

Windlesham.—26 non-parlour type houses at The Avenue, Lightwater, for the U.D.C. Mr. C. Gray, surveyor:—

F. C. Bath, Camberley	£10,547 0
H. Mullins, Woking	10,366 14
C. Morgan & Son, South Farnborough	10,070 0
F. A. Renn, Camberley	10,002 0
A. W. Viner, Windlesham	9,997 0
G. Church & Co., Lightwater	9,740 0
Spear & King, Crowthorne	9,680 0
Geo. Holt & Son, Ripley	9,634 3
Building and Public Works Construction Co., Ltd., Swindon	8,571 0
†W. G. Tarrant, Ltd., Byfleet	8,313 0
Arthur E. Guest, Ltd., London...	7,995 0
For four pairs only—	
J. Corbett, Bagshot	3,048 0

Wix.—Junior school, for the Essex E.C.:—

‡C. H. Carter (Eastern Counties), Ltd.	£3,280

Worksop.—New ward block, 40 beds, new mortuary and additional nurses' bedrooms to the Victoria Hospital, for the Committee. Mr. A. H. Richardson, architect, Market-place:—

*Leverton & Brown, Worksop	£11,052

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